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**USSR REPORT
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ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

DEFINITION OF FINAL NATIONAL ECONOMIC RESULTS

Leningrad VESTNIK LENINGRADSKOGO UNIVERSITETA: EKONOMIKA, FILOSOFIYA I PRAVO in Russian No 17, 1981 (Manuscript received 1 Apr 81) pp 16-22

/Article by A. V. Vorontsovskiy: "Theoretical Problems of Defining the Final National Economic Results"/

/Text/ The problem of measuring and evaluating the final results of economic operations is one of the important problems facing modern economic science. The role and importance of this problem have been emphasized in a number of speeches of L. I. Brezhnev. In the report of N. A. Tikhonov at the 26th CPSU Congress it was indicated that it is necessary to ensure "the leading increase of the final national economic results as compared with the increase of labor and material expenditures, including capital investments."¹

At the same time today a uniform opinion has not formed on the question of what should be understood by the final national economic results, how it is possible to define them theoretically and practically. When defining them one should proceed from the basic economic law of socialism, which formulates the goal of socialist production--the steady increase of the satisfaction of the needs of the workers.² The final national economic results should reflect the degree, or level, of the satisfaction of these need. Their main distinction from the final national economic product consists in the fact that the latter in its essence is the product taken outside the conditions and possibilities of consumption, while the final national economic results are characterized and defined by that portion of it, which will be consumed: first, it is produced in conformity with the structure and volume of the national economic needs; second, all the conditions are created for its complete and comprehensive consumption. Therefore the category of the final national economic results expresses the relations of both the production and the consumption of material wealth. For enterprises and sectors the final results can be examined in two basic forms: first, they are the product, which has been produced and has gone beyond the subdivisions and which from the point of the national economy may be an intermediate product; second, they are those changes in the results of the economic activity of consumers, which the use of this product will entail.

At present there are no uniform, generally accepted indicators or methods, which make it possible to evaluate the degree of the satisfaction of needs or the useful effect from the consumption of certain products or others. Therefore practically all economists agree that it is possible to use as an indicator, which reflects the final national economic results, one of the final indicators of the national

economy: the national income;³ the consumption fund;⁴ the final product of the national economy and the final product of sectors and associations;⁵ the volume of deliveries of products in conformity with the plan and the assortment, quality, dates and conditions of delivery, which have been submitted to the approval of the consumer;⁶ the standard net output⁷ and others.

When examining the possibility of using one or another indicator as a form of the expression of the final national economic results, scientists have made critical remarks on practically all the above-noted indicators. Thus, L. I. Abalkin, in rejecting the possibility of using the consumption fund, notes that in this case "a serious contradiction arises between accumulation and consumption,"⁸ the necessary ratio between them is disturbed, and that the necessary combination of the interests of current and future consumption is achieved only on the basis of "the use of the national income as the most important indicator of the final results."⁹ From this it follows that if in the national economy the optimum ratio between accumulation and consumption is determined and maintained, a rational amount of the accumulation fund is established and the necessary combination of current and future consumption is assured (that is, the above-cited objections of L. I. Abalkin do not occur), the consumption fund can serve as an indicator of the final national economic results.

If we regard the national income as the sought for indicator; it is necessary to bear in mind that it can serve as such when there are specific additional conditions which are connected with its material and physical structure. The achievable level of the satisfaction of needs is determined precisely by this structure first of all, and not by the physical volume. O. I. Ozherel'yev notes that "society, by maximizing the amount of national income, can achieve this in no other way than by ensuring that structure of the product, which corresponds best to the structure of the needs of society as a whole and all its members individually,"¹⁰ that is, the necessary conformity of the two indicated structures acts as an additional condition. The latter is even singled out as the main task of socialist production.¹¹ It is necessary to take this condition into account when analyzing the possibilities of using as a form of expression of the final results any value indicator: the gross output, the commodity production, the sold output, the net output and so forth.

In rejecting the possibility of using the national income as an indicator of the final national economic results, V. Vechkanov writes that "the national income as a whole cannot function as the final result of socialist expanded production: it consists of qualitatively dissimilar parts, one of which (the consumption fund) reflects the goal of production, while the other (the fund of production accumulation) reflects the means of achieving this goal."¹² If it is borne in mind that the consumption fund is a part of the national income and an increase of the nation income may be accompanied by an increase of the consumption fund and that a specific optimum ratio can be ensured between accumulation and consumption, it can be shown that the maximization of the national income, other things being equal, will be accompanied by the maximization of the value of the consumption fund. From the fact that the national income breaks down into two qualitatively dissimilar parts it does not follow that the trends of the development of the national income and a part of it--the consumption fund--are opposed without fail. Moreover, under the above-indicated conditions it is possible to regard both indicators as a form of expression of the final results.

As to the indicators connected with the fulfillment of the plan of deliveries or the fulfillment of economic contracts, it should be noted that these indicators in themselves do not reflect the final national economic results. The achievement of the planned level of such indicators creates the conditions for the subsequent fulfillment of the plan by the immediate consumers, but does not characterize the degree of satisfaction of their needs. Between the volume of delivery and the amount of the final national economic results, which are achievable by means of it, there is a correspondence which is determined by the technological features of the production and consumption of the product, but the indicator of the fulfillment of the plan of deliveries in itself does not reveal either the features of this correspondence or the quantitative value of the final results achievable in this case. Meanwhile the evaluation of the results of economic activity according to the indicators in question will make it possible to ensure the balanced development of the economy, which is aimed at the achievement of the planned results, although the amount of the fulfillment of the plan of deliveries in itself says nothing about what final national economic result the given enterprise or association thereby ensures.

Under present conditions the indicator of the standard net output is acquiring a special role and importance in light of the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality." Without dwelling specially on the role and importance of this complex and interesting indicator, let us note that it is possible to regard it as only one of the forms of expression of the impact for the producer, which is a portion of the value of the produced output, which is defined as the sum of the weighted volumes of the production of various types of output, and the standard of the net output acts as the "weights." It is a question of the impact for the producer because no matter what the value of the standard net output, which is substantially different in the case of a different value of the standards, the degree of satisfaction of the need of its consumer will depend only on the volumes of the output being produced and in the case of an invariable volume of delivery will be the same, that is, will not depend on the value of the standard net output of the supplier.

In principle it is possible to expect that with a sound choice of the value of the standards of the net output and the optimum ratio between them the orientation of enterprises toward the increase of the standard net output may lead to the increase of the final national economic results, although the problem of choosing and substantiating the value of the corresponding standards is no less difficult than the problem of choosing and substantiating the form of the expression of the final national economic results. Precisely the standard, which in its essence is the standard of production, creates great difficulties when comparing the amount of the standard net output and the final national economic results achievable in this case. If we regard the standard net output as one of the forms of expression of the sought final results, a complex system of additional conditions emerges, to which the substantiation of the value of the standards and the ratios between them and the interdependence of the value of the standard net output with the degree of satisfaction of the need and other indicators of the impact for the consumer belong.

Summarizing what was said above, it should be noted that two aspects should always be connected with the concept "the final national economic result": first, a specific generalizing indicator, which characterizes the national economy, is implied

by this; second, a specific system of additional conditions, only in the case of the meeting of which can the generalizing indicator in question serve as a form of expression of the final national economic results, is connected with it. The dual nature of this concept is dictated by the fact that, on the one hand, the final national economic results are always determined by the corresponding set of products, which meets certain private and public needs or others. The satisfaction of needs does not occur outside the product; therefore, the final national economic results always have their own material and physical content. This makes it possible to express them by one generalizing indicator or another, which is determined according to this set of products. On the other hand, no single generalizing indicator can cover all the conditions and interrelations, which determine the achievement of the highest final results in the national economy, on which their value substantially depends.

Such indicators are also poorly linked with the conditions and possibilities of consumption. Hence stems the need for additional conditions which would make it possible to take this into account. On the level of the national economy there are grouped with them: the conditions which ensure the conformity of the structure of the output being produced to the structure of public and private needs; the conditions which determine the basic goals of the development of the national economy, for example, in the form of some parameters of a state, which it is necessary to provide in the future; the conditions which ensure the optimum development of the national economy, for example, a rational ratio between accumulation and consumption, the formation of the optimum size of the accumulation fund, the optimum ratio between current and future consumption and others; the conditions which govern the possibilities of the development of the national economy, restrictions on the most important types of limited resources: capital investments, labor, raw materials and so forth, are grouped with them.

When determining the final results for specific types of output being produced the conditions of the complete assurance of the production and consumption of the given type of output should be added to these conditions. In the sphere of production it is a question of restrictions on the material, financial and manpower resources of the producer, the specific nature of the technology being used, as well as the specific features of the production of the type of output in question. In the sphere of consumption what is meant is the timely and complete support of the consumption of the output with spare parts, the associated equipment and the necessary resources, only with the availability of which can the maximum national economic result, which potentially exists in the produced output, be completely realized. Since some generalizing indicator, which characterizes the national economy, and a specific system of additional conditions are always connected with the concept "the final national economic result," for the determination of the final national economic results it is proposed to use a mathematical economics model, in which the indicated indicators and conditions are given in a formalized form. These ratios should cover the processes and possibilities of the achievement of the goals set for the national economy.

In our opinion, it is possible to overcome the internal discrepancy between the goals of the economic system and their specific embodiment in various indicators, which characterize the national economy, only within such an approach. Each of the generalizing indicators in itself is not an adequate form of expression of the final national economic results, but is merely their specific approximation, which may differ substantially from the actually achievable value. In a certain sense

the role and importance of the problem of the choice of a generalizing indicator when determining the value of the final national economic results thereby decrease, since at present there is no theoretically indisputable integral indicator of the degree or level of satisfaction of needs in the national economy, while all its substitutes in one form or another merely determine the possibilities of satisfying the needs, but do not characterize the level achievable in this case. The choice of the appropriate indicator when determining the value of the final results at the level of the national economy is dictated by the specific economic goals which during the given period of time are the most important and urgent. The problem of the choice of such an indicator is not of an independent nature and is a derivative of the problem of determining the goals and tasks of the development of the national economy.¹³ When analyzing the processes of production in dynamics, especially for the distant future, it may be a question only of specific parameters of the state of the national economy, which it is necessary to achieve.

Under these conditions it is methodologically important to shift from the search for a generalizing indicator, which characterizes the final national economic results, to the search for an adequate form of expression of these results. The model proposed above, which makes it possible to combine the corresponding generalizing indicator as a form of expression of the goal of the national economy with the conditions, features and laws of its development, can serve as such a form. In economic literature it is possible to note the proposal along with the generalizing indicator when determining the impact in the national economy to examine without fail the corresponding additional conditions,¹⁴ although the proposed system of conditions is far from complete, while their formalization¹⁵ is more of a qualitative than a quantitative nature.

It is possible to distinguish two basic types of models for determining the final national economic results. First, there are the models which reflect the conditions of the determination of the overall final results for the national economy as a whole. In them either one of the final indicators of the national economy or the desired parameters of the state are chosen as the indicator, while the remaining conditions are formed on the basis of the above-examined additional conditions for the national economic level. The ratios of the multiblock mathematical economics model of the analysis and planning of the economic efficiency of the national economy of the Belorussian SSR,¹⁶ in which a system of indicators, resultant and factorial indicators, which determine the level of efficiency of the national economy of the republic, is singled out, can serve as an example. Second, there are the models of the determination of the final results of both individual types of output being produced and various measures which are being implemented in the national economy for the purposes of increasing its efficiency. The main indicator can be expressed in the form of expenditures, in the form of a volume indicator or a parameter of the state. The additional conditions characterize the complete supply of the production and consumption of the output, and the products and services necessary for this may be produced outside the producing and consuming sectors. For example, when constructing the model of the evaluation of the final results in the sphere of the operation of new equipment we took into account the following basic restrictions: "the probable volume of the production of new equipment during the year; the upper and lower limits of the need in each sphere of operation; the restrictions connected with the supply of the production of associated equipment and the availability of material, financial and manpower resources."¹⁷ They are formed subject to the specific features of the task in question.

The proposed approach to the definition of the final national economic results by means of the corresponding system of ratios makes it possible to achieve the following results: first, to shift to the search for a more adequate form of expression of the final results with allowance made for the factors influencing them and the laws of the development of the national economy; second, to evaluate quantitatively the influence of these factors and ratios on the value of the achievable final results and to determine the maximum final result under set production conditions; third, to identify those organs and organizations, on which the assurance of the highest final results for certain types of output being produced or others substantially depends, and to direct their activity toward the achievement of these results, to evaluate their efficiency from this point of view; fourth, such a model of the determination of the final national economy results, since it is of an intersectorial nature, can be the basis for the distinction and substantiation of the goal programs which are aimed at the achievement of certain specific national economic goals or others.

FOOTNOTES

1. "Materialy XXVI s"yezda KPSS" /Materials of the 26th CPSU Congress/, Moscow, 1981, p 108.
2. L. I. Abalkin, "Konechnyye narodnokhozyaystvennyye rezul'taty (sushchnost', po-kazateli, puti povysheniya)" /The Final National Economic Results (The Essence, Indicators, the Means of Increasing)/, Moscow, 1978; Yu. S. Muntyan, G. Ya. Kiperman, "Konechnyye narodnokhozyaystvennyye rezul'taty i planovyye pokazateli proizvodstva" /The Final National Economic Results and the Plan Indicators of Production/, Moscow, 1979; V. S. Vechkanov, "The Consumption Fund as a Final Result and a Gauge of Production Efficiency," EKONOMICHESKIYE NAUKI, No 4, 1980; N. Ye. Drogichinskiy, "Indicators of the Final Results of Production," VOPROSY EKONOMIKI, No 12, 1977; Yu. A. Zykov, "The National Economic Socioeconomic Impact of New Equipment," VOPROSY EKONOMIKI, No 12, 1979.
3. L. I. Abalkin, Op. cit.
4. V. S. Vechkanov, Op. cit.
5. Ye. Dyukova, "The Final Product Is a Production Guideline," PLANOVAYE KHOZYAYSTVO, No 10, 1980; Yu. S. Muntyan, G. Ya. Kiperman, Op. cit.
6. N. Ye. Drogichinskiy, Op. cit.
7. Yu. S. Muntyan, G. Ya. Kiperman, "The Final National Economic Results in Planning," PLANOVAYE KHOZYAYSTVO, No 10, 1980.
8. L. I. Abalkin, Op. cit., p 20.
9. Ibid.
10. O. I. Ozherel'yev, "Mekhanizm deystviya osnovnogo ekonomicheskogo zakona so-tsializma" /The Mechanism of the Effect of the Basic Economic Law of Socialism/, Leningrad, 1979, p 133.

11. V. V. Smirnov, "The Useful Impact of the Product of Socialist Production and the Final National Economic Results," EKONOMICHESKIYE NAUKI, No 4, 1980.
12. V. S. Vechkanov, Op. cit., p 53.
13. A. I. Yefimov, "Problemy obosnovaniya gosudarstvennogo plana" /Problems of the Substantiation of the State Plan/, Moscow, 1980, p 121.
14. "Effektivnost' sotsialisticheskogo proizvodstva: kategoriya, rezervy, perspektivy rosta" /The Efficiency of Socialist Production: the Category, Reserves, Prospects of Growth/, Moscow, 1978.
15. Ibid., p 38.
16. "Voprosy teorii i otsenki ekonomiceskoy effektivnosti narodnogo khozyaystva" /Problems of the Theory and Evaluation of the Economic Efficiency of the National Economy/, Minsk, 1976.
17. A. V. Vorontsovskiy, "Some Means of the Comprehensive Determination of the Impact of Research and Development in the Sphere of the Operation of New Equipment," "Problemy deyatel'nosti uchenogo i nauchnykh kollektivov" /Problems of the Activity of the Scientist and Scientific Collectives/, Moscow-Leningrad, 1979, p 171.

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CLASSIFICATION OF NATIONAL ECONOMIC SECTORS

Moscow EKONOMICESKIYE NAUKI in Russian No 10, Oct 81 pp 62-67

/Article by Candidate of Economic Sciences Docent M. Bok (Yuzhno-Sakhalinsk): "On the Question of the Classification of the Sectors of the National Economy"/

/Text/ The accomplishment of the task set by the 26th party congress, "to intensify the orientation toward the achievement of the best final national economic results,"¹ presumes that every sector belonging to the unified national economic complex is performing punctually and in good time its own function in the system of the social division of labor.

In the Procedural Instructions on the Drafting of State Plans of USSR National Economic Development² there is a classification of the sectors of the national economy. However, among economists there are the most different opinions with regard to the assignment of one sector or another to a specific group in the system of the national economy. All the sectors of the national economy in the Procedural Instructions are divided into the sphere of physical production and the nonproductive sphere. At the same time M. A. Abramov divides them into physical production and the service sphere.³ E. P. Gorbunov subdivides the national economy into three components: a) physical production, b) nonphysical services, which serve consumption, c) spiritual production;⁴ V. S. Semenov subdivides it into four components: a) physical production, b) the sphere of spiritual production, c) the service sphere, d) the management sphere.⁵ There is no unanimity with regard to the determination of the place of such sectors as material and technical supply, trade and public dining. It is well known that in the Procedural Instructions these sectors are assigned to the sphere of physical production. However, some economists assign them to the nonproductive sphere.⁶ In analyzing the place of public dining in the system of the national economy, V. M. Royzman believes, for example, that "...public dining should be regarded as a specific sector of the national economy--a sector of physical production, which is grouped with the sphere of services."⁷ It is possible to cite many such examples. What has been said attests that it is necessary to improve the methodological basis of the classification of the sectors of the unified national economic complex.

In our opinion, when classifying the sectors of the national economy it is advisable to use first of all the concepts "monosector" and "polysector." Industry, agriculture and construction belong to the monosectors. In these sectors the function of production absolutely dominates, and no debates arise with regard to their place in the unified national economic complex. But there are those sectors of the national

economy, in which functions belonging to both the production and nonproductive sphere are performed. Such, for example, are transportation, communications, material and technical supply, trade, public dining and so forth. It is possible to regard them as polysectors. And precisely the classification of polysectors is the subject of disagreements.

For the development of a scientifically sound classification of the sectors of the national economy the choice of the criterion of their grouping is of great methodological importance. In the Procedural Instructions it is noted that "the sectors of the national economy from the standpoint of the nature of the social division of labor and participation in the creation of the gross national product and the national income are divided into the sphere of physical production and the nonproductive sphere."⁸ Thus, in the indicated document two attributes are taken as the criterion of the classification of the sectors of the national economy: a) the nature of the social division of labor; b) participation in the creation of the gross national product and the national income.

For monosectors such an approach is fully justified, since here the place of the sector in the system of the social division of labor as a whole coincides with the participation in the creation of the gross national product and the national income. As for polysectors, some of them, while participating in the creation of the gross national product and the national income, perform social functions which do not belong by their nature directly to physical production. The already mentioned material and technical supply, trade, public dining and others are meant here. Therefore it is impossible, obviously, to use simultaneously as the criterion of the classification of the sectors of the national economy two different attributes: the participation in the creation of the gross national product and the national income and the place in the system of the social division of labor. Meanwhile both of the named attributes are necessary for the grouping of the sectors of the national economy.

It seems to us that in /the classification of the sectors of the national economy a differentiated approach: the reproductive and the functional, should find reflection/ /in italics/.

The aggregate labor of society, on the one hand, creates the gross national product and the national income, ensuring thereby the necessary conditions for socialist expanded reproduction. From this point of view all the sectors can be subdivided into the production and nonproductive sphere. Those sectors which directly participate in the creation of the gross national product and the national income are assigned to the production sphere. All the remaining sectors should be assigned to the nonproductive sphere.

The production of the gross national product and the national income by sectors of the USSR national economy in 1978 is characterized by the following data (see the table).

The aggregate labor of society creates not only a physical product, but also another useful impact. Every sector should perform efficiently a special function in the system of the social division of labor. "Every sector," as Comrade L. I. Brezhnev indicates in the Accountability Report of the CPSU Central Committee to the 26th party congress, "is faced with its own urgent tasks and specific problems."⁹ Therefore it is expedient to group the sectors of the national economy not only

according to the reproductive principle, but also according to the functional principle, that is, from the point of view of the performance by every sector of its specific function in the system of the social division of labor. Here it is expedient to subdivide all the sectors into the sphere of physical production and the service sphere. Those which directly create material wealth are assigned to the sphere of physical production. It is necessary to assign all the others to the service sphere.

Production of the Gross National Product and the National Income by Sectors
of the USSR National Economy in 1978, Billions of Rubles*

	Gross national product	National income
Industry	633.1	216.2
Agriculture	147.0	73.6
Transportation and communications	43.7	25.9
Construction.	99.2	46.0
Trade, public dining, procurement, material and technical supply and other sectors.	69.1	60.8
Total	<u>992.1</u>	<u>422.5</u>

* Source: "Narodnoye khozyaystvo SSSR v 1978 g." /The USSR National Economy in 1978/, Moscow, 1979, pp 41, 386.

Thus, the classification of the sectors of the national economy can be represented in the following form (see Diagram 1).

Diagram 1. Classification of the Sectors of the National Economy

Reproductive principle (criterion: participation in the creation of the gross national product and the national income)	Functional principle (criterion: nature of the social division of labor)
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Production sphere	Nonproductive sphere	Sphere of physical production	Service sphere
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In the Procedural Instructions it is noted that "the classification of the sectors of the national economy is a grouping of types of activity by sectors which are distinguished by the nature of the functions being performed by them in the overall system of the social division of labor."¹⁰ However, in essence, no such classification is being made, while the need for it exists, which, in particular, the authors of the textbook "Ekonomika neproizvodstvennoy sfery" /The Economics of the Nonproductive Sphere/ note.¹¹

The classification of the sectors of the national economy according to the functional principle can be defined more precisely.

The classification of the sectors of the national economy according to the functional principle is shown in Diagram 2.

The service sphere delivers and organizes the consumption of the wealth created in the sphere of physical production, and if necessary performs its own services. It encompasses numerous sectors of the national economy, which perform both a productive and a nonproductive function.

**Diagram 2. Classification of the Sectors of the National Economy
According to the Functional Principle**

Sphere of physical production	Service sphere		
	Production infrastructure (production service)	Social infrastructure (service of personal consumption)	Service of public needs

In our opinion, it is expedient to divide the sectors of the service sphere into three groups: production service (the production infrastructure), the service of personal consumption (the social infrastructure) and the service of public needs. It should be borne in mind that the importance of these sectors under the conditions of mature socialism is steadily increasing. At the 26th CPSU Congress Comrade L. I. Brezhnev noted: "...it is difficult to imagine an efficient agro-industrial complex and a modern village without a developed road system, reliable transportation, elevators, storehouses, warehouses, refrigerators, a packaging service. Disorder and a lag in any of these units inevitably affect the quantity and quality of the final product."¹² The need to develop the production infrastructure also fully applies to industry and construction. The importance of the sectors which serve personal consumption, that is, the social infrastructure, was also noted at the congress. The party raised the question of increasing the responsibility of the managers of economic enterprises for the development of the social infrastructure.

Such areas of activity as science, management, lending and so on, in our opinion, belong to the sectors of the service of public needs. Their increasing role under the conditions of mature socialism is also well known. It is necessary to differentiate the service sphere in the broad sense and the service sphere in the narrow sense. The concept of the service sphere in the broad sense covers production service, the service of personal consumption and the service of public needs, that is, the service sphere as a whole, while the concept of the service sphere in the narrow sense covers only the service of personal consumption.

In economic literature in most instances, when it is a matter of the service sphere, what is meant is the service sphere in the narrow sense. For example, the authors of the book "Sfera obsluzhivaniya pri sotsializme" /The Service Sphere Under Socialism/ in their work study the activity of such sectors as personal service, municipal services, trade, public dining and so on, that is, the sectors serving personal consumption.¹³ V. S. Semenov, V. Ye. Komarov and others view the service sphere in the same way, that is, in the narrow sense.¹⁴

The identification of the concepts "the service sphere" and "the sphere of services" is encountered.¹⁵ We believe that it is necessary to distinguish these concepts. The concept "the sphere of services" is connected with the production of special use values. K. Marx wrote about services: "This expression implies in general nothing other than the special use value which this labor provides, like any other commodity; but the special use value of this labor obtained here the specific name 'services' because labor renders services not as a /thing/ /in italics/, but as an /activity/ /in italics/."¹⁶ Consequently, the concept "the sphere of services" is closer to the production sphere than the concept "the service sphere." Moreover, it is well known that K. Marx distinguished two types of services: personal services and services which are the result of the production process. And

since in special literature this division is usually connected with the production of the national income, it is expedient, it seems to us, to use the concept "the sphere of services" when grouping the sectors of the national economy according to the reproductive concept. At the same time the concept "the service sphere" is not connected with the creation of the national income and it should be used when grouping the sectors of the national economy according to the functional principle.

Some economists identify the sphere of services with the nonproductive sphere. In our opinion, such an approach is not valid. M. Z. Bor is correct when he emphasizes that "a service can be the result of the labor expended both in the sphere of physical production and outside this sphere."¹⁷ Thus, the concept "the sphere of services" is significantly broader than the concept "the nonproductive sphere."

Thus, when classifying the sectors of the national economy a differentiated approach is necessary. Below we cite a classification of the sectors with allowance made for the two principles--the reproductive and the functional principles, which were the basis for it.

Classification of the Sectors of the National Economy According to the Reproductive Principle

I. Production Sphere

1. Industry
2. Agriculture
3. Forestry
4. Construction
5. Freight transport
6. Communications for service of production
7. Geology and prospecting of mineral resources
8. Material and technical supply
9. Procurement
10. Trade
11. Public dining

II. Nonproductive Sphere

1. Housing and municipal services
2. Personal service
3. Passenger transport
4. Communications for service of nonproductive sphere and the population
5. Health, physical culture and social security
6. Education
7. Culture and art
8. Science and scientific service
9. Lending and state insurance
10. Science

Classification of the Sectors of the National Economy According to the Functional Principle

I. Sphere of Physical Production

1. Industry
 2. Agriculture
 3. Forestry
 4. Construction
- ##### II. Service Sphere
- a) Production infrastructure (production service)
 1. Freight transport
 2. Communications for service of production
 3. Geology and prospecting of mineral resources
 4. Material and technical supply
 5. Procurement

- b) Social infrastructure (service of personal consumption)
 1. Trade
 2. Public dining
 3. Housing and municipal services
 4. Personal service
 5. Passenger transport
 6. Communications for service of nonproductive sphere and the population
 7. Health, physical culture and social security
 8. Education
 9. Culture and art

/Continued on following page/

- c) Service of public needs
1. Science and scientific service

2. Lending and state insurance
3. Administration

The proposed approach to the question of the classification of the sectors of the national economy and their grouping, which was drawn up on this basis, in our opinion, solve many of the now existing debatable questions. Thus, for example, to the question, where are such sectors as material and technical supply, trade and public dining assigned, it is possible to give the following answer: from the point of view of their participation in the creation of the gross national product and the national income they are assigned to the production sphere (according to the reproductive principle), while according to the nature of activity, that is, according to the function performed by them in the system of the social division of labor, they are assigned to the service sphere (according to the functional principle). And there is no need to "carry" these polysectors from one grouping to another. In this case there is also no need to divide the sectors into three or four groups, as now happens in economic literature. But the main advantage of the approach set forth here to the classification of the sectors of the national economy, in our opinion, consists in the fact that it makes it possible to determine precisely the function of every sector in the system of the social division of labor.

FOOTNOTES

1. "Materialy XXVI s"yezda KPSS" /Materials of the 26th CPSU Congress/, Moscow, 1981, p 143.
2. "Metodicheskiye ukazaniya k razrabotke gosudarstvennykh planov razvitiya narodnogo khozyaystva SSSR" /Procedural Instructions on the Drafting of State Plans of USSR National Economic Development/, Moscow, 1974. Hereinafter they are called the Procedural Instructions.
3. See M. A. Abramov, "Proizvodstvo i sfera obsluzhivaniya" /Production and the Service Sphere/, Moscow, 1977.
4. See E. P. Gorbunov, "Struktura i effektivnost' obshchestvennogo proizvodstva" /The Structure and Efficiency of Social Production/, Moscow, 1974, pp 68-69.
5. See V. S. Semenov, "Sfera obsluzhivaniya i yeye rabotniki" /The Service Sphere and Its Workers/, Moscow, 1966.
6. See D. I. Pravdin, "Neproizvodstvennaya sfera: effektivnost' i stimulirovaniye" /The Nonproductive Sphere: Efficiency and Stimulation/, Moscow, 1973, p 8; G. P. Ivanov, "Neproizvodstvennaya sfera i sotsialisticheskoye vosproizvodstvo" /The Nonproductive Sphere and Socialist Reproduction/, Moscow, 1978, p 15, and others.
7. V. M. Royzman, "Plan, khozraschet, stimuly v obshchestvennom pitanii" /The Plan, Cost Accounting, Stimuli in Public Dining/, Moscow, 1975, p 17.
8. "Metodicheskiye ukazaniya..." p 702.
9. "Materialy XXVI s"yezda KPSS," p 40.

10. "Metodicheskiye ukazaniya...," p 701.
11. "Ekonomika neproizvodstvennoy sfery" /The Economics of the Nonproductive Sphere/, Moscow, 1980, p 16.
12. "Materialy XXVI s"yezda KPSS," pp 46-47.
13. See "Sfera obsluzhivaniya pri sotsializme" /The Service Sphere Under Socialism/, Moscow, 1969, p 3.
14. See V. S. Semenov, "Sfera obsluzhivaniya i yeye rabotniki"; V. Ye. Komarov, "Sfera obsluzhivaniya i narodnoye blagosostoyaniye" /The Service Sphere and the Well-Being of the People/, Moscow, 1973.
15. See V. S. Semenov, "Sfera obsluzhivaniya i yeye rabotniki," p 4.
16. K. Marx and F. Engels, "Soch." /Works/, 2d edition, Vol 26, Part I, p 413.
17. M. Z. Bor, "Effektivnost' obshchestvennogo proizvodstva i problemy optimal'nogo planirovaniya" /The Efficiency of Social Production and the Problems of Optimum Planning/, Moscow, 1972, p 56.

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PLANNING AND PLAN IMPLEMENTATION

COST EFFECTIVENESS OF ECONOMIC MEASURES

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/Article by N. P. Fedorenko, D. S. L'vov and N. Ya. Petrakov (Moscow): "On the Criteria and Methods of the Evaluation of the Cost Effectiveness of Economic Measures"/

/Text/ The pursuit of the policy of increasing the efficiency and intensification and improving the qualitative indicators of the economy requires the adoption in the practice of economic management of more perfect criteria of the evaluation of the efficiency of social production. It is impossible to achieve the maximum increase of efficiency without knowing specifically in what this increase finds expression and what indicators characterize it.

In this connection it is now possible to come across very different points of view. Some authors believe that efficiency in the final analysis finds expression in the decrease of the production cost and the increase of the profit; others insist on the assurance of the increase of labor productivity; still others insist on the increase of the output-capital ratio; others speak about the increase of the profitability and so on. Even in the official methods on the evaluation of the effectiveness of various kinds of economic measures, which were approved by the same state department, different methods of calculating the economic impact are recommended.

At present in the system of planning and economic calculations at different levels of management more than 10 methods and procedural instructions are in effect: "The Standard Method of Determining the Cost Effectiveness of Capital Investments"; "The Method (Main Principles) of Determining the Cost Effectiveness of the Use in the National Economy of New Equipment, Inventions and Rationalization Proposals"; "The Method of Determining the Cost Effectiveness of Automated Control Systems of Enterprises and Production Associations"; "The Method of Determining the Wholesale Prices of New Products for Production Engineering Purposes"; "The Temporary Method of Determining the Cost Effectiveness of Expenditures on Environmental Protection Measures"; "The Method of the Economic Appraisal of the Most Important Types of Natural Resources"; "The Temporary Method of Evaluating the Effectiveness of Expenditures on the Nonproductive Sphere"; "The Standard Method of Calculations of the Development and Location of Production With the Use of Mathematical Economics Models" and others /1-8/.

Each of them is intended for a specific sphere of planning activity and takes into account its specific nature and features. But at the same time they should all be based basically and primarily on uniform methodological principles of the evaluation of the efficiency of social production. Meanwhile, the analysis shows that no two among them are completely identical according to the methods of calculating the economic impact for the national economy, the system of standards being used, the group of indicators being taken into account and so on. The effectiveness of capital investments and new equipment are evaluated in different ways; they are regarded in the indicated enforceable enactments as different and unrelated problems. Approximately the same situation has also formed in the area of the economic substantiation of prices. All this is complicating the implementation of the measures on the increase of the level of planning work in the national economy, which are stipulated in the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979.

The difficulties of evaluating the effectiveness of economic measures are being aggravated by the fact that in some methods the emulation of the established level of production efficiency and of the local levels of the functioning of an economic object is proclaimed as the basic principle. Thus, in the new edition of "The Standard Method of Determining the Cost Effectiveness of Capital Investments" it is indicated: "Capital investments are recognized as cost effective, if the indicators of the overall effectiveness, which were obtained for them, are not less than the reporting indicators for the preceding period... the cost effectiveness of capital investments at operating associations and enterprises should not be less than the level which ensures the payment of the fee for capital, the payment of interest for bank credit, rent and other fixed payments, the formation of the stimulation funds of the associations and enterprises and the payment to the budget of the established profit withholding taxes" /1, p 7/.

If a sector has a low profitability, the demand on the effectiveness of investments, according to /1/, should be substantially lessened as compared with the demand made on the investments which have been allocated for the development of highly profitable sectors. Thus, for transportation and communications the obtaining of a return of 5 kopecks per ruble of investments is considered adequate, for agriculture--7 kopecks, for industry--16 kopecks, for construction--22 kopecks and for trade and supply--25 kopecks. As we see, the degree of demandingness on effectiveness can change subject to the established cost accounting relations and first of all to the level of prices in the individual sectors of the national economy. However, prices are revised periodically, and, consequently, the cost accounting conditions of operation also change. And in the case of the adjustment of prices the principle of emulation of local interests often plays a dominant role. In such situations, the greater the expenditures are, other things being equal, the higher the price is. Of course, in this case cost accounting will not properly "work" for the increase of production efficiency. It is, for the most part, oriented toward the stimulation of the steady increase of the final indicators of local production efficiency. Any reorganization of it, and especially capital construction on a new technical base, temporarily worsens these indicators. And it is necessary to agree to this in the name of future great efficiency, which often begins to appear beyond one or two five-year plans. But during this period not only the level and dynamics of the indicators of local efficiency, but also the place of the given enterprise (association or sector) in the system of social production may change. That is why the orientation toward the current needs of production, toward the

prevailing system of cost accounting when determining the most effective means of the organizational and technical development of production is simply inadmissible. The long-range interests of the national economy as a whole, and not of its individual links, no matter how important they might seem at present, should be regarded as of paramount importance.

However, the recommendations ensuing from the official methods often contradict this principle. As a result, a planner has the opportunity to prove the effectiveness even of versions of local measures, which are very irrational from a national economic point of view. This is giving rise among a certain portion of economic scholars and managers to a lack of faith in the criteria and methods of evaluating the effectiveness of economic measures, which are now being used in planning and design practice, to the idea of their arbitrary nature, of the fact that they have no real economic meaning and that they cannot be used in the system of indicators of the plan. That is why it is so important to concentrate efforts on the development of research in the area of the most important key problem of economic science--the criteria and methods of the evaluation of the efficiency of social production.

At present the Economics Department of the USSR Academy of Sciences is carrying out the preparation of a draft of a comprehensive method of the evaluation of the effectiveness of economic measures, which should meet the following basic requirements: the establishment of uniform methods of the choice of the most effective versions of large-scale and local (mass) economic measures; the assurance of the evaluation of the functioning of production at various levels of management and the analysis of the fulfillment of the plan; the substantiation of the system of long-term economic standards and of prices; the improvement of the mechanism of the management of the national economy on the basis of economic standards and prices, which point the local interests of economic units in the direction of national economic interests. The experience of: the economic experiments in the USSR Ministry of the Electrical Equipment Industry, the USSR Ministry of Heavy and Transport Machine Building, the USSR Ministry of Tractor and Agricultural Machine Building, as well as in other ministries and departments, in which they relied extensively on the indicators of cost effectiveness; the use of "The Standard Method of Determining the Cost Effectiveness of Capital Investments," "The Method of Determining the Cost Effectiveness of the Use in the National Economy of New Equipment, Inventions and Rationalization Proposals," "The Procedural Instructions of USSR Gosplan on the Drafting of State Plans of USSR Economic and Social Development," "The Method of Determining the Wholesale Prices of New Products for Production Engineering Purposes"; the new revision of the price lists for industrial products, was studied and generalized during the performed research.

Upon completion of the work on the draft of the comprehensive method it will be necessary to discuss it with the participation of representatives of the scientific community and experienced workers, as well as to make an extensive experimental check. Here the provisions of the method should be used comprehensively. This means that the recommended criteria of the choice of economic measures can be used to the full extent only in case of the simultaneous establishment of the appropriate system of prices and economic standards. The introduction of the provisions of the method in economic practice, as they are approved, should be carried out in stages. At the initial stages it is hardly expedient to require the revision of the wholesale prices introduced on 1 January 1982, but aggregate values and estimates of resources for planning and design calculations should be elaborated. At

the same time it is necessary to gradually introduce a special procedure of measuring the above-standard outputs of products and the economy of production resources in the current economic operations of enterprises and production associations. Such a measurement should be made according to indicators close to the accounting prices and estimates, which are used in the planning and design substantiations, which will make it possible to bring the prevailing cost accounting stimuli closer to the criteria of efficiency, which are used in design decisions.

The Underlying Principles of the Comprehensive Evaluation of the Effectiveness of Economic Measures

The basic principle is the assurance of a national economic approach. It implies the need for:

the selection from the possible versions of measures of the best one from the national economic point of view for its subsequent inclusion in the plan; this should be ensured by means of national economic criteria of effectiveness, of which the system of target indicators of the plan of the socioeconomic development of the country is the basis;

the consideration when evaluating the effectiveness of measures of all the basic consequences of their implementation both directly in the sphere where the given measure is being implemented and outside it, that is, in all the other sectors of the national economy, in which its influence, including the social, economic, ecological and other consequences, appears;

the use of a norm of effectiveness of capital investments, which is uniform for the entire national economy;

the consideration when determining the effectiveness of economic measures of the economic appraisals of natural resources;

the introduction in the calculations of the economic appraisals of the effectiveness of the use of manpower resources, including a coefficient of additions to the wage, which is uniform for the entire national economy and takes into account the benefits and payments from public consumption funds (in some instances it is advisable to establish such a standard in proportion to the number of workers);

the consideration of the additional expenditures of society, which are connected with the use of specific categories of workers, the provision of normal conditions for the living and labor activity of people in regions being newly developed, the benefits in the pay and social security of those who are employed in the corresponding jobs or in remote regions of the country, as well as the other special-purpose expenditures of society on the maintenance of the conditions of the balanced application of labor;

the calculation of the impact not for a year taken separately, but for the entire accounting period, which includes, as a rule, development, the assimilation of production, the series output of products, as well as their effective service life for the consumer;

the assurance of the completeness of the coverage of the most significant expenditures and results, which are established on the basis of a coordinated standard base; the absence of their double counting; the target, structural and time comparability of all the component expenditures and results, which are being taken into account;

the evaluation of the feasibility of the best version, which is established by means of national economic criteria and by taking into account the requirements of the cost accounting mechanism and the local interests of individual sectors and economic units.

Here there should be understood by an economic measure any planning, design, organizational-technical or other measure, which is aimed at the obtaining of a specific socially useful result and requires for its realization the corresponding expenditures of natural resources and resources of living and embodied labor. An economic measure can be elaborated in several versions, which are distinguished by the expenditures (in the case of the equality of the results), by the results (in the case of the equality of the expenditures) or by both simultaneously.

The economic measures (or sets), which are elaborated and approved centrally at the national economic (intersectorial), sectorial or regional level and are aimed directly at the fulfillment of specific assignments, which are included in the State Five-Year Plan, as well as the Basic Directions of USSR Economic and Social Development for 10 Years, are grouped with the large-scale measures. The implementation of each such measure (or a set of them) directly influences the intersectorial and intrasectorial proportions and the rate of socioeconomic development, the level and dynamics of the long-term economic standards and of prices.

The large-scale measures are versions of the development of social production at its different levels and in different spheres: the national economy (in the case of its examination as a unified whole and as a set of sectors of physical production); comprehensive goal programs (including intersectorial and interregional programs); sectors and regions (including the corresponding tasks of the distribution of productive forces); the basic economic units (enterprises and associations).

Those measures, which are substantiated during the mass planning and design calculations, which are carried out directly at the associations or enterprises and are aimed at the improvement of the output being produced, at the increase of its quality and the technical and economic level of production and at the adoption of new methods of the organization and management of production, are grouped with the local economic measures. The implementation of each of these measures requires the relatively small (as compared with the sectorial and all the more so the intersectorial scale) expenditure of production resources, while its socioeconomic results are localized primarily within the given sector, region or economic object. There are assigned to the main spheres of local (mass) economic measures: the development and introduction in the national economy of new equipment, inventions and rationalization proposals; capital construction; foreign economic relations; the improvement of production management; circulation; the nonproductive sphere; the improvement of the use of nature.

The effectiveness of economic measures at any level appear in the indissoluble unity of its two aspects: the material and physical (qualitative) extent of the meeting of social needs or the degree of achievement of the socioeconomic results,

which is expressed by the indicators of goal-oriented development; the value extent of the comparison of the measurable results and expenditures of economic resources, which is characterized by the indicators of cost effectiveness.

The system of target indicators and standards, which are taken into account when drafting national economic plans, should be used for evaluating the extent of goal-oriented development. Among them are: the indicators of the physical volume (physical or conditional physical indicators) of the produced output or national income; the most important sociodemographic indicators, which reflect the dynamics of the size and composition of the population, the social structure, as well as the development of property relations; the indicators which characterize the improvement of the socioeconomic and production conditions of labor and the change in the general educational and occupational level of the workers, including the decrease of manual labor, the improvement of its conditions and safety procedures, the provision with an infrastructure, the training and increase of the skills of the regular labor force and specialists and so forth; the indicators of general consumption both as a whole and according to its individual types (per capita, of basic foodstuffs and nonfood consumer items, the provision of families with cultural and personal items and so on); the indicators of the development of the sphere of services (the provision of housing and municipal services, personal services, children's, preventive medical, sanatorium, health resort and other institutions of service, transportation services, means of communication and so on); the indicators of the increase of real income, of public consumption funds, which are differentiated by individual social groups; the indicators of the qualitative level of the natural environment; the indicators of the development of the sphere of sociocultural services and information (the theater, the movies, television, the press and so on); the indicators of the increase of the educational and cultural level, the development of science and so on.

The indicators of social development have their own specific nature: the impossibility of the direct measurement of some social results, in connection with which it is necessary to use methods of their indirect evaluation; the need for the assurance of the levels of the achievement of the results in the established range of social standards and target norms; the possibility of a change of the economic result in connection with the need for the change of some social result, which is measurable by means of the corresponding indicators.

Only the measurable social indicators should be taken into account in the calculations of effectiveness. The qualitative characteristics should be taken into account at the stage of the formulation of one version or another when making the decision on its implementation, and also as additional characteristics when evaluating the actual production efficiency.

The social standards, which determine the critical levels (their violation is inadmissible), and the target norms, the observance of which ensures the most favorable conditions of vital activity, are the basis of the calculation of the indicators of goal-oriented activity. In turn, the values of the target norms should meet the requirements of: practicability, that is, should be achievable in principle on the condition of the concentration of the efforts of society on their realization; dynamicity, that is, should correspond to the achieved level of socioeconomic development; differentiation, which reflects the natural, climatic, demographic, national cultural and other features of individual regions.

The interconnection of the two aspects of effectiveness is assured by the fact that the level and dynamics of the target indicators, as a rule, are considered predetermined by the plans of social and economic development. The methods of calculating and substantiating the target indicators and norms are a component of the overall method of formulating such a plan. These indicators and norms act as boundaries, forming the domain of permissible decisions. The choice of the best version of development is made in this case in accordance with the indicators of the cost effectiveness of production. Here the attendant results, which reflect the socioeconomic consequences of the implementation of one version or another, should be taken into account.

The cost effectiveness of economic measures (or their versions) is determined on the basis of the comparison of the results of production and the expenditures of economic resources, which are connected with their implementation and are represented in monetary form. In the case of such an evaluation it is permissible to use the current wholesale prices. However, it is necessary to remember that they still do not always reflect the effectiveness and the quality of the output being produced or the services being rendered, which can lead to inadequately sound calculations of the effectiveness. In these cases one should rely on the planned accounting prices, which balance supply and demand and reflect the production efficiency achieved in the plan.

An extensive group of socially useful consequences of the implementation of an economic measure, which are expressed in monetary form, are regarded as the results: the output of the products or the performance of the services, which are needed by society; the increase of their quality; the release (economy) of limited economic resources; the speeding up of production processes (the shortening of the time of production and circulation); the prevention of adverse effects on the environment and so on.

The direct and the attendant results should be distinguished. The result directly connected with the purpose of the measure being implemented (it is manifested, as a rule, in the sphere of the implementation of this measure) is understood as the direct result, the results of the effect of its implementation on other production spheres and the vital activity of people are understood as the attendant result.

The consumption, which is expressed in monetary form, of the limited economic resources required for the adoption of the given measures is included in the expenditures. The most important types of economic resources are: natural resources (reserves of minerals, land, water and timber resources, the assimilating capacity of the atmosphere, hydrosphere and lithosphere); resources of living labor; resources of embodied labor (objects and means of labor, including the components of the production infrastructure).

When determining the cost effectiveness of economic measures three types of indicators are used: 1) the economic impact for the national economy (the difference between the results of production and the expenditures of economic resources); 2) the national economic effectiveness (the ratio of the results to the expenditures); 3) the partial effectiveness (the ratio of the result to the expenditures of any one resource--capital investments, manpower resources and so on). The first two are interconnected with the characteristics of goal-oriented development and function with respect to them as subordinate criteria. The significance (priority)

of the indicated indicators changes subject to its directions, the demands on the use of economic resources, as well as the level of the problem being solved.

The influence on the level and dynamics of effectiveness of primarily the scale of the implementation of the outlined measures is taken into account in the indicator of the national economic impact. Its use is justified under the conditions of the basic proportions and ratios, which are established by the plan, that is, when evaluating local (minor and relatively independent) economic measures.

The magnitude of the national economic effectiveness reflects the economy of economic resources per unit of output, that is, the requirements of the intensification of production on the basis of scientific and technical progress. The use of this indicator is justified under the conditions of the identity of the compared versions of the measures according to the end result, but variation by the volumes of output of the intermediate product or the structure of production is permitted. Therefore "triviality" of an economic measure in such problems, as a rule, is not observed, which also predetermines the advantages of the latter indicator in the evaluation of the efficiency of social production and the basic groups of large-scale measures.

The characteristics of partial effectiveness are convenient for the analysis of the influence of individual components of the expenditures of resources on the value and dynamics of the first and second types. When an economic measure, which was chosen according to any of them, has worsening dynamics of partial effectiveness, it is necessary to analyze the possibilities of the additional enlargement of the permissible set of versions by also including those which satisfy the indicators of the first and second types and at the same time do not worsen the achieved level of the values of the third type. If it is impossible to do this, the organ making the decision should examine the question of creating the appropriate cost accounting conditions for the implementation of the best version with respect to the criterion of the national economic impact (in particular, it should revise the current system of norms, prices and indicators).

When using the criteria of the first and second types for the economic substantiation of economic measures all the versions being compared should meet the corresponding social and ecological requirements and should ensure the fulfillment of the plan assignments established by superior levels of management on the volume, assortment (structure) and quality of the products (services), the dates of their receipt and so forth.

If the economic measures being compared are evaluated by means of current prices, the so-called rule of the identity of the useful result acts as a necessary condition for the choice of the best one of them. Here the calculations are oriented toward an identical volume of the output of products or services with allowance made for the deadlines of the achievement of the set goal. If the volumes of output or the deadlines for such versions are different, the identity can be reestablished by the inclusion of additional sources for the covering of the "deficit" of output with their (as a rule, lower) technical and economic indicators.

When the economic measures being compared differ in the quality of the output (services) obtained as a result, it is possible to ensure the identity by examining not only its producers, but also its consumers, in other words, to evaluate the expenditures and results and, consequently, the effectiveness of the economic

measure at the place of the use of the output, with allowance made for its effectiveness and the amount of the expenditures arising in this case. The final product in such a case will be, according to the assumption, already identical.

When the differences of the volumes and dates of the receipt of the output or its quality according to the versions are not so great as to change substantially the conditions of consumption, while the expansion of the statement of the problem, which is aimed at the observance of the principle of the identity of the impacts, for certain reasons or others is difficult, the measures can be reduced to a comparable form. For this the additional impact, which is caused by a greater volume of output or its higher quality, is determined by multiplying the increase of the volume of this output by its evaluation, which corresponds to the plan (wherever possible, the optimum plan) of a higher level of management. The amount of the additional impact is subtracted from the amount of the expenditures connected with the implementation of the chosen version.

When evaluating the effectiveness of economic measures it is necessary to take thoroughly into account the time factor--the change in the dynamics of the values of the standard indicators of the volumes and the structure of the expenditures and results, their economic nequivalence, if they are asynchronous and so on. In this case the difference between the cumulative national economic results for the accounting period and the expenditures, which have been reduced to a single moment, acts as the indicator of the national economic impact. The coefficient of reduction is determined according to the formula:

$$\alpha_6^t = (1+E)^{-(t-t_6)}$$

where α_6^t is the coefficient of reduction of the expenditures and results of year t to the base moment of time t_6 ; E is the standard of reduction of the expenditures and results of production at different times, which is taken in the method to be equal to the standard coefficient of the effectiveness of capital investments.

Either the beginning of the corresponding planning period (a year, a 5-year period), during which the measures in question will be implemented, or the latest (with respect to all the measures being compared) date of the placement of all the projects into operation is usually used in the calculations as the base moment.

Ω_i^T --the integral economic impact for the national economy for measure i --is calculated according to the dynamic characteristics of the expenditures and results:

$$\Omega_i^T = X_i^T - Z_i^T,$$

where X_i^T is the monetary valuation of the physical result of production (the product of the volume of output times the wholesale price); Z_i^T is the integral adjusted expenditures on the production of the given volume of output.

If the capital investments according to the measures are separated in time, while the current expenses change by years, the integral or cumulative adjusted expenditures for the accounting period will be:

$$Z_i^T = \sum_{t=0}^T K_i^t \alpha_{\delta}^{-t} + \sum_{t=1}^T U_i^t \alpha_{\delta}^{-t},$$

where K_i^t is the capital investments in year t on measure i ; U_i^t is the net operating costs (excluding renovation deductions) in year t for measure i .

This formula is correct for the case when beyond the accounting period all the measures, both according to the expenditures and according to the results, are identical. If at its end they differ substantially according to the residual value of the fixed capital, their amount should be additionally taken into account in the calculations of the integral adjusted expenditures.

When the production cost for the economic measures being compared is constant in time, while the capital investments are made in 1 year, which precedes the beginning of the receipt of the useful result, the expenditures are calculated according to the formula of the annual adjusted expenditures:

$$Z_i = C_i + E_H K_i,$$

Z_i is the annual adjusted expenditures when implementing measure i ; C_i is the production cost of the annual volume of output (work, services) for measure i ; K_i is the capital investments in productive capital for measure i ; E_H is the standard coefficient of the effectiveness of capital investments.

Along with the material expenditures, amortization, wages and the standard effectiveness of capital investments the valuations of the natural and manpower resources being consumed (used) should be included in the adjusted expenditures.

When the results of production also change in time, in the calculations of the effectiveness of economic measures their integral, or cumulative, amount during accounting period T is taken into account, that is,

$$X_i^T = \sum_{t=1}^{t=T} X_i^t \alpha_{\delta}^{-t},$$

where X_i^t is the result of type i , which is realized in year t (usually it is defined as the product of the volume of output, work or services in physical terms times the price of a unit of them).

In the case of a substantial difference of the effectiveness of the use of the output (services) according to spheres of application the sum result is found by adding up the products of the volumes of such use according to all these spheres times the corresponding planned accounting prices.

The general approach to the choice of the most effective economic measure or the best version of its implementation reduces to the following:

the measures or their versions are selected from all the potentially possible ones, each of which meets the requirement of the achievement of the set social result (that is, the level and dynamics of the indicators of goal-oriented development), they form a set of socially feasible and economically justified measures;

the most advantageous version is determined on the basis of the criterion of the maximization of the integral (cumulative) economic impact for the national economy (accordingly the minimum integral adjusted expenditures);

this version is checked for conformity to the conditions of its feasibility in economic practice (from the standpoint of forming restrictions on resources, prices, rates, payments and so forth);

if the cost accounting conditions when implementing the most advantageous version are not met, an attempt is made to enlarge the set of versions in question and to find in it one not worse according to the criterion of the maximization of the integral economic impact for the national economy, which meets the indicated requirements;

when the observance of the cost accounting conditions leads to a discrepancy with the national economic criterion of effectiveness, for example, when instead of the best version another one, the implementation of which yields a substantially smaller economic impact, proves to be advantageous, preference is given to the former and the question of changing the prices, introducing subsidies and so on is raised. The latter is chosen, if the difference in the characteristics of the effectiveness of the versions being compared is relatively small, while the implementation of the better one of them involves substantial changes in the prevailing economic mechanism.

After the approval of the best version as the object of the implementation of the plan its technical and economic indicators are reflected in the appropriate sections of the plan (production, capital construction, labor, social development and others). From this point the need arises for the evaluation of the effectiveness of the functioning of production at different levels of management and the analysis of the fulfillment of the plan. For this one turns to the system of target indicators and norms, as well as to the general and particular indicators of the cost effectiveness of production.

The examined principles can be implemented in the system of planning and economic management by various means. Here the specific versions of the tools of management, as well as the values of the corresponding economic norms should be coordinated with each other so that the result of their combined influence on the functioning of economic objects and on the evaluation of the effectiveness of measures would meet the requirement of the maximization of the final national economic results. Thus, the standard of the fee for productive capital should coincide with the standard of the adjustment of the expenditures and results and, accordingly, with the norm of the effectiveness of capital investments and with the interest for long-term bank credit, if the initial value of the capital, which is established with allowance made for the period of its creation, serves as the base for its calculation, while the total amount of the amortization deductions for renovation, which are determined with allowance made for the time factor, remains at the disposal of the organizations using the capital. Deviation from these conditions can lead to the appearance of different standards.

The economic standards, which are in effect in planning, design, credit and financial practice, as well as perform analogous or similar functions in the economic mechanism, can be combined in the following groups:

the consideration of the time factor, the effectiveness of capital investments, the fee for fixed and working production capital, interest on long-term bank loans;

the economic appraisal of land and other natural resources, rent and fixed payments of economic organizations (in particular, the payments for land being removed from agricultural circulation);

the effectiveness of the use of manpower resources and the payments to the state budget and other financial funds in proportion to the wage, the size of certain categories of workers or others and so forth.

The coordination of the corresponding standards does not necessarily mean their equality, but requires the indication and wherever possible the evaluation of the influence of those factors which govern their difference under certain conditions or others of the functioning of the economy.

The importance of the consideration of uncertainty increases in the case of the economic substantiation of the measures in question as their scale and the length of the period of the designing, construction and operation of the corresponding projects increase. The indicators of effectiveness, which are determined on the basis of the comparison of the expenditures and results in monetary form, are inadequate, as a rule, for the evaluation of the effectiveness and the comparison of the versions of large-scale measures and long-term programs. The use of more complex procedures with multicriterional approaches and expert assessments is necessary. This also pertains to the local measures, the implementation of which is connected with social consequences which are hard to measure.

The Peculiarities of the Measurement of the Effectiveness of Large-Scale Measures

When evaluating the effectiveness of large-scale measures an interconnection between the degree of achievement of specific indicators of goal-oriented development and the cost effectiveness should be ensured. It is ensured by the fact that the level and dynamics of the target results for the greater part of the tasks are considered to be predetermined by the comprehensive plan of social and economic development. There are also examined at this level, strictly speaking, the methods of calculating and substantiating the target indicators and norms, which function as restrictions, forming the domain of the permissible versions of decisions with respect to the target results. The choice of the best version of development is made in this case according to the indicators of the cost effectiveness of production.

The value Y of the produced national income (net output), which is established for individual economic objects as the difference between the volume of the gross (commodity) production (services) X and the amount of material expenditures M , including amortization, acts as the economic result of the implementation of a large-scale measure:

$$Y = X - M.$$

There are taken as the expenditures on the production of the net output the net or standard expenditures of resources 3, which are calculated according to the formula:

$$3 = (1+E_L)V+E_H\Phi, \quad (1)$$

where V is the average annual value of the wage fund of the workers of physical production; Φ is the average annual value of the fixed production capital (according to its replacement value); E_L and E_H are the standard coefficients of the efficiency respectively of the use of manpower resources and of the capital investments in fixed production capital. When the necessary information is available, the appraisals of natural resources should also be taken into account in this formula.

For the determination of the total or adjusted expenditures Z for the production of individual products the material expenditures, including the amortization, are added to the amount of the standard net output, which is calculated according to (1), that is:

$$Z = 3+M = C+E_H\Phi,$$

where C is the production cost of the produced output plus the supplementary valuation of manpower resources.

The economic impact of large-scale measures is the difference between the net result of production of the given year and the standard expenditures on obtaining it:

$$\Theta_T = Y - 3. \quad (2)$$

The indicator Θ_T is the static characteristic, and therefore is suitable primarily when evaluating the effectiveness of the functioning of the corresponding systems and complexes.

The generalizing indicator of the specific effectiveness of the implementation of a large-scale measure is calculated on the basis of the indicator of the annual economic impact:

$$\epsilon = \frac{Y}{3} = \frac{Y}{(1+E_L)V+E_H\Phi}, \quad (3)$$

where ϵ is the generalizing indicator of the specific effectiveness.

The effective functioning of production should meet the condition $\epsilon \geq 1$. The amount, which is the inverse of ϵ , is the indicator of the type of expenditures per ruble of output: $\lambda = 1/\epsilon$. The indicators of the effectiveness with reference to the evaluation of the gross results and the total expenditures can also be calculated in the similar manner, that is:

$$\Theta'_T = X - Z \text{ and } \epsilon' = X/Z.$$

The partial indicators of the specific effectiveness are:

the productivity of national labor $\eta = Y/L$, where L is the number of workers of physical production (with reference to the individual sector or economic unit it is the total number of industrial personnel engaged directly in production);

the output-capital ratio $\beta = Y/\Phi$;

the materials-output ratio $r = M/X$.

The partial indicators of effectiveness are calculated both for the national economy as a whole and with a breakdown by its individual sectors, republics, regions and economic units. They serve for the analysis of the individual aspects of the effectiveness of large-scale measures and the identification of additional possibilities of growth.

The generalizing dynamic characteristic of the effectiveness of the implementation of a large-scale measure is the indicator of the impact of intensification. It is determined on the basis of the comparison of the economic impacts of functioning for two contiguous periods of time (for example, one year as compared with another, or the last year of a five-year plan with its first year and so on) and is the incremental value:

$$\Delta \Theta_H^t = \Theta_H^t - \Theta_H^{t-1},$$

where Θ_H^t is the impact of intensification, or the increase of the economic impact of year t as compared with year $t-1$.

The standards of the effectiveness of economic resources of one base year or another (in this case, year $t-1$) are used when determining the values of Θ^t and Θ^{t-1} , that is:

$$\Delta \Theta_H^t = (Y^t - \bar{S}^t) - (Y^{t-1} - \bar{S}^{t-1}) = \{Y^t - [(1+E_L^{t-1})V^t + E_{\Phi}^{t-1}\Phi]\} - \{Y^{t-1} - [(1+E_L^{t-1})V^{t-1} + E_{\Phi}^{t-1}\Phi^{t-1}]\}.$$

A single base year T , with respect to the impact of which the impacts of other years are compared, can be selected within the indicated period. In this case for any of these years the standard expenditures of economic resources will be:

$$\bar{S}^t = (1+E_L^t)V^t + E_{\Phi}^t\Phi^t.$$

In the case of consolidated calculations of the dynamics of the effectiveness of the national economy as a whole there can be taken as the indicator $(1+E_L^T)V^t$ its approximate evaluation $V^t L^t$, where V^t is the average annual wage fund of one worker of physical production with allowance made for the benefits and payments from public consumption funds, while L^t is the number of workers of physical production in year t .

The value of the impact of intensification is determined in the case of unidentical economic results of the 2 years being compared. The calculation of the general indicator of the effectiveness with reduction to an identical economic result makes it possible to identify the relative economy of economic resources, which is the consequence of scientific and technical progress, that is:

$$\Delta \Theta_{\text{rel}} = \frac{Y^t}{Y^t} - \frac{\bar{S}^t}{Y^t} - \frac{\bar{S}^{t-1}}{Y^{t-1}},$$

where $\Delta \vartheta_{HT\Pi}^t$ is the impact of scientific and technical progress (HT Π) in year t as compared with year τ .

The difference between the increase of the economic impact (the impact of intensification) and the impact of scientific and technical progress is the indicator of the impact of the base year $\Delta \vartheta_M^t$, which is multiplied by the growth rate of the results of production:

$$\Delta \vartheta_M' = (Y^t - Y^\tau) \left(\frac{Y}{Y^\tau} - 1 \right) = \Delta \vartheta_M' \left(\frac{Y}{Y^\tau} - 1 \right).$$

The system of indicators of cost effectiveness is designed for the analysis of the factors of the development of the entire national economy, sectors, regions and individual objects and for the choice of economic measures at these levels. These factors in their aggregate ensure the increase of the economic result of production (the national income or the net output) and can be represented in fractions of the contribution to the economic result:

from the increase of the number of annual workers of the productive sphere (as compared with the conditions of the base year): $V^\tau(L^t - L^\tau)/\Delta Y$;

from the increase of fixed production capital: $E_H^\tau(\Phi^t - \Phi^\tau)/\Delta Y$;

by means of the impact of intensification: $\Delta \vartheta_H^t/\Delta Y$, including by means of the enlargement of the scale of production: $\Delta \vartheta_M^t/\Delta Y$, by means of scientific and technical progress: $\Delta \vartheta_{HT\Pi}^t/\Delta Y$.

The opinions stated in this article concerning the comprehensive evaluation of the cost effectiveness of economic measures are of a preliminary nature. In-depth scientific studies are necessary for the further development of the examined approach. Apparently, much stage-by-stage work, which is connected with the realization of the underlying principles of the comprehensive method in planning practice, lies ahead. The changeover to uniform principles of calculation in the sphere of the technical and economic substantiations of planning and design decisions should be accomplished at the first stage. Subsequently they could be used in the economic substantiation of prices and long-term planning standards. At the final stage the method could be used for the preparation of proposals on the further improvement of the economic mechanism.

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PLANNING AND PLAN IMPLEMENTATION

'IZVESTIYA' ECONOMIC OBSERVER QUESTIONS OLD HABITS

Moscow IZVESTIYA in Russian 9 Jan 82 p 2

[Article by V. Romanyuk, economic observer for IZVESTIYA: "101 Percent is Always Required: If the State Plan for an Enterprise is Adjusted Upward, Is It Balanced?" under the heading "By Way of Discussion"]

[Text] Instrument manufacturing is proceeding at a stable rate. In fact, the plan for the first year of the five-year plan was fulfilled ahead of schedule by the USSR Ministry of Instrument-Making, Automation Equipment and Control Systems (Minpribor). To cite the basic figures: the output volume of commodity production rose by 6%, given a five-year plan target of 5.2%; labor productivity increased by 6.7%, compared to the established 5.5% rate of increase; the share of production in the higher category of quality exceeded 45% of the total production volume.

Over the last three five-year plan periods, the state plan for this branch has not once been adjusted downward. The plan's stability is assured on the basis of long-term economic normatives to coordinate directly the interests of the branch, the production association, the enterprise and the shop. And the instrument-makers' secret in the undoubted success of their experiment--one in applying the principles of pure economic accountability and self-repayment--is above all the fact that the mechanism of economic accountability works as if it were automatic, insofar as payments into the budget remain stable, in that the plan may be adjusted only at the expense of an economic organization's own funds. But this inevitably reduces both funds for development and those for economic incentives.

Who is his own enemy? As soon as it has become unprofitable to adjust a plan downward, all enterprises showed a vital interest in the end result of their work. But it is of course necessary to speak with reserve about automating the activity of a system of stimuli. Economic levers depend on organizational levers. A branch plays the part of a guarantor of payments into the budget, independently, so to speak, of the current interim results of economic activity. Naturally, it is chiefly the enterprises that lag behind that inevitably occupy the attention of all concerned. Nonfulfillment of the plan is compensated temporarily at the expense of the industrial production association's reserves, and for that reason, each derangement of this process, anywhere at all, at once has a negative effect on the general financial state of the branch complex and provides an incentive to

eliminate factors causing nonfulfillment. Where before, workers in a regulatory link were paid bonuses without regard to end results, now incentives are strictly tied to plan fulfillment, to profit and to labor productivity.

Without exception, all the "Soyuzschetmash" enterprises accomplished their last year's program. The industrial production association's output was millions of rubles above target. To be sure, the overfulfillment was not substantial: it was difficult to reconcile the plan with the supplying of material and equipment.

"But of course, there were possibilities of an upward-adjusted plan for the enterprise," says the head of "Soyuzschetmash," S. Khrapchenko. "We could produce more magnetic-disk storage units for computers at "Sigma" in Vilnius, more new automatic accounting apparatus at "Schetmash" in Kursk--more of every type of instrument for which there is great need. But reserves must be assessed very carefully with an eye to what is available. Let us say that 16,000 motors are needed to produce the required quantity of peripheral units . . . but the Ministry of the Electrical Equipment Industry has produced only 9,500 . . ."

It is understandable: plan fulfillment and overfulfillment are important matters. But the main thing is to realize the set task of the national economy. It was not by accident that a very stringent system of thrift in using all types of resources and severe suppression of mismanagement and waste was named as the first condition of plan fulfillment at the November (1981) Plenary Session of the CPSU Central Committee. After all, who needs production of goods in which resources are only squandered?

Let us take Minpribor itself. There is no denying that we need to improve and increase the production of program control units, data systems engineering, and cash registers that "Soyuzschetmash" carries out. But the production of consumer watches is a different matter. "Soyuzchasprom" was producing watches at the rate of 60 million annually and consumers are not going to welcome additional growth--the market is saturated and no one has four watches. In the Planning Department of "Soyuzchesprom," conversation centered not only on the plan, but also--and even more--on the problem of assessing consumer demand. A situation has arisen such that overfulfillment of the plan would not serve anyone's interest. Here, most probably, a thoroughgoing reorganization of the goods-assortment policy is required. Last year "Soyuzchasprom," for example, produced altogether 685,000 electronic quartz watches, but this year it plans to produce at most 1,300,000 units or somewhat over two percent of total watch production.

Let us examine, for example, what happened to production in overfulfillment of target by more than 1.5 percent, as achieved by the First Moscow Watch Factory at the price of considerable upward adjustment. Indicators of the branch complex were improved, yet 90,000 additional "Polet" wristwatches produced on this account were, at the very least, not a matter of desperate need. To a significant degree, these articles filled above-target reserves; owing to lack of demand, no orders are being placed for them. And that was nothing new to the

director of "Soyuzchasprom." Why, in such a situation, should a plan be overfulfilled?

The position taken by Minpribor foresees that all forms of material incentive and also the branch's financial reserves will become active levers in the struggle to adjust the plan upward and to fulfill it strictly. It has been established, for example, that overfulfillment of plan by up to two percent only places at the production association's disposal an over-plan profit at the full normative. Profit in excess of two percent plan overfulfillment is retained by the production association at the rate of the normative reduced by half. (In the recently approved new procedure providing for the transition in the industrial ministries to operational methods of economic accountability, this "ceiling" is raised to three percent.) As we see, distributing profit by this system makes it profitable to adopt a well-balanced plan that is adjusted to a certain degree upward in comparison with the Five-Year Plan targets.

Quite often, however, when the results of competition are drawn up, including those for Minpribor, the usual stereotypes take over: those enterprises are leaders that have a higher percentage by volume indicators of plan overfulfillment. The gross volume indicator again demonstrates its power. It is regrettable that the experiment being carried out in the context of the USSR Minpribor was to be "entered" in the previous planning system. The instability of normatives, caused by the practice of planning "on the basis of what has been earned," by frequent changes in wholesale prices and by the adjustment of articles of the financial plan to annual indicators actually achieved undermines the collectives' interest in showing reserves and in more thorough work to improve economic plan indicators. The surprising thing is this: even today, profit normatives are determined in a speculative manner, by direct calculation--from that which has been "achieved"--without accounting for the branch's development prospects.

And in the final analysis, a situation seldom arises in which it is economically unprofitable for the enterprises and production associations to adopt upward-adjusted plans, to force scientific and technical progress and to raise the quality of production. But to support high-quality production, a large number of progressive techniques must be adopted and work in this direction ought to be stimulated by all possible measures--above all by the plan itself and the structure of its indicators.

But what do we actually have? The head of the "Soyuzchasprom" planning department, A. Androsova, maintained that there is a persistent struggle within the enterprises to raise the coefficient of metal utilization and that the targeted indicators of rhythm are strictly monitored. But the Ministry of Ferrous Metallurgy delays the delivery of springs, the Ministry of Nonferrous Metallurgy, that of brass and the Ministry of the Chemical Industry, that of plastic . . . For this reason there are gaps in the production rhythm, although it is calculated for ten-day periods, days and even hours in all the production links. But not only the external factors are at fault. The imbalance of the production plan leads to disorganization in exploiting new capacities for which--thus we have succeeded--targets are automatically imposed. The construction organizations,

for example, were at fault in that the capacities of the Serdobskiy and Chistopol'skiy watch factories were not exploited; as a result of this, collectives were paid from economic incentive funds.

For a long time, the plan of the First Moscow Watch Factory has been imbalanced, in particular with respect to the output of watch mechanisms and casings. What is wrong? Plan miscalculation? No, "hammered into" the plan are capacities for casings manufacture that were to have been under construction in 1979, but quite obviously will not be put under construction this year either.

"And they demanded a half million rubles for all that," says G. Mineyev, the deputy director for economic questions, not without bitterness. "They may be obtained from central funds for economic incentives and financial reserves of the Union production association;" and capacities would be exploited, although not until 1982. Not a ruble was allocated and, in addition, the savings were withdrawn by the enterprise only from the wage fund in the amount of 300,000 rubles.

But in fact, such a form of incentive is foreseen by the economic accountability of the branch! And it is less profitable to break off this chain. Incidentally, last year at the factory, progressive renewal of equipment continued. Labor productivity grew by 9 percent, which was the equivalent of the conditional release of 560 workers. But what did the association obtain from all this? Nothing, in essence: funds for economic incentives remained at the previous level.

"Just as now," continues Mineyev, "when economic activity is assessed in terms of normative net production, enterprises are obliged to find themselves in similar situations, likewise with upward-adjusted targets. However, the targets of watchmaking plants are different and those who "put through" a less demanding plan are emerging as leaders. We are like runners for whom different distances are measured, whereas the finish line remains the same. And indeed, in theory all are agreed that upward adjustment of the plan is required for stimulation. In practice, the lion's share of the material incentive fund goes for stimulation of volume indicators and only an insignificant part for the growth of labor productivity, although precisely this same productivity "has in tow" such qualitative indicators of plan fulfillment as increased profits and decreased production costs.

In referring to the tasks of 1982, Comrade L. I. Brezhnev stated at the November (1981) Plenary Session of the CPSU Central Committee, "In adopting the plan, we have proceeded strictly from real possibilities. And we will demand with the same severity that it be absolutely fulfilled . . . For the plan, after being adopted, becomes the law of our life and work and everyone--from worker to minister--is obligated to regard it as the law and as an important party and government document."

From the standpoint of state interests, it is advantageous to persuade an enterprise to adopt an upward-adjusted plan in preference to overfulfilling a downward-adjusted plan. It would seem in either case that the national economy benefits

by additional production. But if, in the first case, this rise is consciously taken into account and is combined with concern for material and equipment supply and for the real needs of consumers, then in the second case, the resolution of these questions becomes more complicated and the price of the same fractions of a percent becomes different. As a rule, if there are stringent norms for metal, it is simply not practicable to receive additional resources; for precisely this reason, one must not skimp on metal in the plant or on the bench when there are sufficiently strict quotas for conserving it. Only the norm with fair "margins" can easily be exceeded.

The matter is complicated still more by a stereotyped view in the planning and supply agencies that the plan is consciously kept too low. I asked S. Khrapchenko how he views the additional percentage point by which the planned target may be overfulfilled.

"The over-plan percent is not always necessary," he says. "This percentage point does give us a reserve of soundness, however, and is, if you will, an element of insurance against an extremely undesirable situation, in which the enterprise or production association risks underfulfilling the plan, even though it be by only one-tenth of one percent. And however far the plan may have been adjusted upward, the consequences are most lamentable: the collective loses incentive funds; the engineering and technical specialists remain without bonus payments. It is thought that it is time for the USSR Gosplan itself to review its relationship to these fractions of one percentage point."

It is no secret: the overfulfillment of plans, especially by a significant amount, will not seldom bear witness to their poor quality. This also applies to development normatives. A deficit in materials, the disturbance of conditions agreed on, shifts in deadlines for introduction of capacities from which production is to be obtained--all these results of an imbalanced plan are perceived by economists in the department as an unavoidable evil and create stereotyped thinking and behavior along these lines, which forces the concealment of existing reserves for an appropriate maneuver. And the plan still contains all sorts of discrepancies, "plan reserves," or, on the other hand, targets that are not linked to resources. Today in the watch industry, for example, all the faults that trouble the work of the instrument industry are all the more tangible, and in the final analysis this holds back the updating of the goods assortment that is produced. The expenditures of labor in producing electronic quartz watches are extremely high. This is the point on which to concentrate the abilities of participants in competition, and this is the place to utilize reserve funds for material incentive!

Today there is talk of the possibility that the whole system of indicators that determines how we evaluate the operations of enterprises, production associations and branches will be aimed at increasing the efficiency and quality of labor. Meanwhile, gross output indicators in the majority of branches continue to remain dominant in appraising the results of the enterprises' operations, and such an extremely important indicator as the realization of deliveries agreed on

is taken into account only as a formality. In the statements of the USSR Central Statistical Administration on the fulfillment of annual and even quarterly plans, it is regularly noted that a number of production associations and enterprises do not fulfill their plans for delivery as stipulated in agreements and orders. Their number amounts to half and more of the total industrial enterprises in the country and is decreasing slowly, in spite of supplemental measures to improve the responsibility of suppliers.

"In the final analysis, the indicators do not determine the weather," says I. Pogosov, head of the USSR Central Statistical Administration. "I can welcome 110% plan fulfillment when it is a matter of cotton fabric, but I oppose overfulfillment of plan where it concerns dyes of poor quality or the production of shoes in outdated styles (we can produce more of everything in the world, but there still will not be enough high-quality, fashionable footwear). We must always have the interests of the consumer before our eyes."

Absolutely, when we speak of production which is sorely needed by the national economy, the overfulfillment of a plan becomes a supplemental factor in the balance of the economy as a whole. This makes possible better development of plans and their fulfillment at a stable rate along every technological step on the production line. The party imposes a precise and clear task: it is necessary to prepare better plans and to fulfill them more accurately. Production must be better organized and its realization improved. In a word, work more efficiently! In this connection, the test of economic accountability principles that the instrument-makers are carrying out and the results of this experiment are especially significant for our whole industry.

"The experiment must be continued," is the conviction of S. Khrapchenko, head of "Soyuzschetmash." "At the 26th Party Congress, there was emphasis on the need to restore the original meaning of the self-repayment concept. Our production association is ready to make the transition to the self-repayment indicator in the capacity of basic indicator, and to make profit the calculated indicator, the one to be taken into account. I am convinced that the national economy is not at all unified regarding how--whether at the expense of lowered self-repayment or at the cost of increased realization--the final outcome is achieved."

Thus, a basis is provided for the branch's whole system of indicators to "work" directly or indirectly on an upward-adjusted, practicable and scientifically based plan.

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INVESTMENT, PRICES, BUDGET & FINANCE

ESTONIAN SSR PRICE COMMITTEE CHAIRMAN ON NEW PRICES

[Article by Yu Vladychin, chairman of the ESSR Price Committee: "New Wholesale Prices and Effectiveness of Production"]

Tallinn RAHVA HAAL in Estonian 17 Jan 82 p 2

[Text] New wholesale prices for industrial products and revised tariffs for electricity and fuel became effective on 1 January 1982. Wholesale price and tariff revisions are carried out according to the directive of the CPSU Central Committee and the USSR Council of Ministers "On the Improvement of Planning and Strengthening the Economic Mechanism's Influence on Improving Production Efficiency and Work Quality." It should be stated that the method of price formulation in our country as a whole fulfills the task assigned to it. At the same time progress in the national economy and a higher level of economic planning and management require that planned price formulation take an active part in solving the important social and economic problems of a developed socialist society. For this reason planned price formulation must embark on a qualitatively new epoch.

Wholesale prices of a majority of the branches of production have not been revised for almost 12 years and they have become obsolete in some respects.

During this time production costs in some branches have declined as a result of technological progress--such as electronics and some machine tooling branches--but in others they have risen for several reasons, primarily in the production of fuel and energy and raw materials. In energy and mining production is becoming more complicated in some areas of our country that have previously been exploited, and as a result the costs of petroleum, gas, coal and ore production have increased. Expenses also increase due to the exploitation of the northern regions of our country which have become the predominant centers for fuel and raw materials production.

The wholesale prices in effect no longer correspond to the production costs in many branches of industry, not reflecting them accurately and thus fail to create self-sufficiency in the activities of the enterprises.

The organs of price formulation together with the ministries and agencies did a large job from 1979-1981 in revising wholesale prices. The ESSR State Price Committee together with the ministries and agencies developed and approved 101 wholesale and tariff structures.

Wholesale prices effective on 1 January 1982 have been coordinated with the changed production and sale costs of industry. In order that the highest possible economic justification for prices be obtained the price plans submitted by the production ministries to the Price Committee were carefully analyzed. The implementation of new wholesale prices guarantees profitable work in most enterprises and collectives of the productive branches and facilitates the use of other levers of the economic mechanism. Conditions for economic stimulation and self-sufficiency for meeting the unchanged tasks and enterprises of the five-year plan are established on the basis of long-term norms for increasing efficiency. The new wholesale prices remain in force until the end of the 5 year period, a fact of great importance. First, the stability of qualitative indicators is maintained and second, the increased efficiency and lower production costs will begin to be reflected in the economic activities of the enterprises--the producers of the respective products.

In the process of formulating new wholesale prices, measures to revise standards and technical conditions of production were worked out together with the ESSR Administration of the USSR State Committee on Standards. This was done so that obsolete products would not be included in the new tariffs. At the same time the standards and technical conditions of more than 25 percent of the revised documentation were raised.

In the course of implementing new prices and tariffs ways were found to raise the importance of conserving material resources, accelerating scientific and technical progress, raising the quality of production and the comprehensive differentiation and thorough usage of mineral raw materials.

For example, the revised prices in the construction industry are designed to stimulate the production of highly effective products that guarantee savings of labor and materials. The territorial differentiation of construction material costs has been improved, favoring a more rational siting of enterprises of this branch of industry.

A higher profitability has been established for economical and high-quality products most demanded by the national economy. In machine construction the margin of profitability of machines, dies and spare parts is 1.4-1.8 times higher than in other production.

In light industry the design is to stimulate wider selection and innovation in accordance with the demands of the population, to improve the quality and appearance of products, and to increase production of children's items. Increased profitability has been established in wholesale prices for a large number of yard and twine goods, modern cloth (velvet, corduroy, denim) and cloth with improved finishing. The production of higher quality, elastic leather and model shoes is also stimulated. The wholesale prices of knit outerwear and knit underwear take into full account the differences in labor volume required for the various models.

Parameter norms allowing for an exact calculation of prices and for establishing prices for new lines directly in the plant have been set for knit outerwear and finished leather goods.

Fixed wholesale prices will be established in the fish industry, where wholesale prices have not previously been in force. The new wholesale prices will guarantee the necessary profitability and contribute to improvements in quality and to a more complete and rational usage of fish resources.

In order to stimulate cost reductions in establishing new production lines the USSR State Committee on Prices decreed that 50 percent of saving achieved by reductions in materials and labor in producing products of higher quality will be assigned to the stimulation fund, in the case of products of the first category the amount will go to additional profit account. This system makes it attractive for enterprises to plan and produce new lines with low production costs.

Thus a result of the improvement of the wholesale price system is a favorable condition for stimulating technological progress.

It must also be noted that the ministries and agencies of our republic are not sufficiently active in developing and implementing new, highly effective techniques and materials, as well as improving quality and halting the production of obsolete items. In the 2 years since the passage of the new regulation for improving the economic mechanism not a single proposal for assigning a stimulation surcharge to items improving production efficiency has been received by the ESSR Price Committee. Stimulation premiums have very rarely been implemented for products of enterprises directly subordinated to the Union, whose machine industry product prices are approved by the USSR State Committee on Prices. Such products are made by the "Talleks" collective, the Tallinn Machine Plant im. J Lauristin, and the "Ilmarine" plant.

Creation of conditions for reducing material costs in production is designed to greatly facilitate implementation of norms for net production; the establishment of these norms took place at the same time with the revision of wholesale prices. In our republic practically all ministries and collectives implemented this indicator in planning and pricing their production and management on 1 January 1982.

It must be said that the increase of wholesale prices and tariffs in industry will increase costs in construction and agriculture. Increased construction costs are taken into account in the establishment of budgets and norms after 1 January 1982.

Additional costs in agriculture are compensated by introducing two price schedules for products designed for agrarian use.

The implementation of new higher wholesale prices will not be accompanied by a rise in retail costs of those consumer products bought from state or cooperative stores.

Revision of wholesale prices and tariffs in industry will not result in changes of retail prices and tariffs of the electricity consumed by the population.

In order that the costs of those enterprises and organizations serving the population most directly be reduced, tariffs of retail and food outlets' energy use have been kept constant, as well as tariffs for heat used for greenhouses, residence and communal buildings, and for hot water production. In several branches of the light industry (cloth, shoes, knitware), food industry (sugar, tea, tobacco, pasta), lumber materials, standard housing, childrens' furniture, paper products, and some other product production costs exceeded retail prices due to higher prices for raw materials and parts, electricity and fuel, as well as due to increases in profits necessary for self-sufficiency. According to a government decision and in conformance with a system devised by the USSR Finance Ministry the difference will be compensated by a reduction of the profit portion assigned to state funds, or by direct state subsidies.

The state retail price policy must be considered as a policy of a general price stability, based economically on the retail price changes mandated by changes in the quality of various items or groups of items.

The Basic Directions for USSR economic and social progress from 1981-1985 indicate that a firm line must be drawn to assure the stability of basic food and consumer prices.

The reduction of production costs is a necessary condition for assuring the stability of retail prices. The unerring implementation of price stability for basic food and consumer items is an extensive and complicated task that includes a wide complex of questions. This fact in turn poses several requirements for ministries and collectives producing consumer goods that have to be met unerringly. First, a stable or ever-increasing level of production and marketing costs must be achieved by a reduction of labor costs, and a stable increase in the volume of consumer goods, a wider selection and improvement of quality according to society's demands must be guaranteed. The price formulation organs for their part will assure that the prices of new products are economically justified, i.e., that they be such that industry will become interested in a rapid renewal of selection and improvement in quality, and that these products at the same time are affordable to the average consumer. This in turn brings forth the requirement that the new production lines supersede previous products in quality and character, and that they contain elements of innovation.

9240
CSO: 1815/20

INDUSTRIAL DEVELOPMENT AND PERFORMANCE

CONTINUED GROWTH OF OUTPUT FOR SOVIET ECONOMY FORESEEN

East Berlin AW-DDR AUSSENWIRTSCHAFT in German 6 Jan 82 pp 1, 3

[Article: "USSR: Growth of Economic Output Continuing in 1982"]

[Text] The targets set by the Law on the USSR Economic Plan for 1982 take into account the real capacities of the Soviet economy and the requirements for its further expansion and they are in accordance with the 1981/85 five-year plan. The plan is based on the results achieved in 1981. Increases were registered for material production and labor productivity. The program concerning social development and improvement of the living standard in 1981 was fully implemented.

The Economic Results of 1981

According to preliminary estimates, in 1981 the net income increased by approximately R 13 billion (i.e. 3 percent) over 1980. For the most part, this gain is attributable to the industrial sector, which showed a production increase of over R 21 billion (3.4 percent). The output of natural gas and--above all--the production of apparatus and automation devices, computers, machine tools, agricultural technology and other products of the machine building industry and of chemical products such as plastics, synthetic resins and fertilizer showed above-average increases. The output of industrial consumer goods rose by 3.6 percent. The industrial capacities were expanded by 200 new large-scale enterprises. At the beginning of 1982, the national economy's basic assets amount to approximately R 1,200 billion.

Consistent efforts were made to implement the long-term program for developing the agricultural sector and consolidating its material-technical basis. In accordance with the plan, the agricultural sector was provided with machines, installations and other technical equipment.

The real per capita income of the population rose by 3.6 percent. The output of the social consumption funds increased by 4.2 percent to R 122 billion. The retail turnover exceeded R 283 billion. Total services amounted to R 8.5 billion, a 6.6-percent increase over 1980.

Addressing the Supreme Soviet at the end of November, N. K. Baybakov, chairman of the State Planning Commission, pointed out that but for certain objective and subjective factors the 1981 economic and social results would have been greater. Above all, this goes for the agricultural sector, where unfavorable weather

conditions again caused considerable losses, and for delays in the start-up of production capacities, which were responsible for nonfulfillment of a number of industrial and agricultural production quotas.

Greater Increases in Output Planned for 1982

Industry

For 1982, higher production targets have been set. The rate of growth of industrial production will be accelerated, as compared to 1981. The increase planned--4.7 percent--is equivalent to an absolute gain of R 30.4 billion. The output of producer goods is to increase by 4.8 percent, and that of consumer goods, by 4.6 percent. On account of the increases in labor productivity (4.1 percent), industrial production can be expanded by nearly 90 percent. Focal points of industrial development are the fuel and energy sector, the metallurgical industry, the machine building industry, the apparatus and automation industry and the chemical industry. Aside from the expansion of industrial production, the structural improvement of the industrial sector is of great importance; for example, within the framework of the planned 2.6-percent increase in the output of electrical energy, the energy volume produced by nuclear power plants is to increase by 24 percent. As regards ferrous metallurgy, the production of highly refined metal products is to undergo accelerated expansion. In the chemical industry, the high rate of growth of the production of plastics, synthetic resins and chemical fibers will be maintained. The machine building industry, whose output volume is supposed to be expanded by 5.5 percent, is to step up primarily the production of advanced machinery, equipment and apparatus distinguished by improved unit performance and productivity. Moreover, the reorganization of the machine building sector--in accordance with the requirements concerning implementation of the foodstuffs, energy and consumer goods program--will be accelerated.

Special attention is directed toward the consumer goods sector. It is planned to expand the production of foodstuffs, above all meat and dairy products. In light industry, the total cotton goods output is to be increased by 4.6 percent, with the production of cotton fabrics expanding by 6.7 percent, that of linen fabrics, by 9 percent, and the output of satin fabrics, by 7.5 percent. As to household goods and goods for private consumption, the plan stipulates a 3.4-percent increase, placing emphasis on the production of furniture, color television sets, tableware and household chemicals.

In the course of 1982, approximately 4,000 new machines, installations, equipment and materials are to be included in the production program, while the production process will adopt over 270 advanced technical processes. The share of products bearing the state quality seal is to be further increased.

Agriculture

Heavy demands are made on the agricultural sector; this year, the agricultural production volume is to reach R 136.5 billion, an increase of 10.2 percent over the average volume produced during the period from 1976 to 1980. For all agricultural products, higher quotas have been established for both production and purchase.

In order further to consolidate the material-technical foundation of the agricultural sector and to improve the living conditions in the countryside, considerable capital has been allocated for 1982. The total investment volume amounts to R 37 billion, i.e. nearly 27 percent of the total investment volume projected for the entire national economy in 1982. For soil improvement alone, R 9.9 billion have been allocated in order to insure expansion of the irrigated acreage by 700,000 hectares, expansion of drained acreage by 800,000 hectares, and water supply for an additional 5.4 million hectares of pasture land. The construction of housing and cooperatives in the countryside is being accelerated.

Advanced technologies, fertilizer and other material-technical equipment are being allocated on a larger scale. The commodity turnover of the organizations of the State Committee for Agrotechnology (goskomsel'choztekhnika) and of the Agrochemical Production Association will be increasing by 4.3 percent to R 24.4 billion.

As regards stimulation of agricultural production, various measures are being implemented: In accordance with the resolution "Concerning Improvement of Planning and Economic Stimulation of the Production and Purchase of Agricultural Products," R 4 billion have been allocated so as to raise the purchase prices. The profits of the state sector of agriculture--projected at R 4 billion--will be used almost in their entirety for production expansion and for the establishment of economic incentive funds in the sovkhozes and other state agricultural enterprises.

Transportation Sector

In accordance with the planned production expansion and the siting of the production capacities, the freight turnover in the transportation sector will be increasing by 3 percent. The budgetary allocations for the further development of the transportation and telecommunications sector amount to R 30.7 billion, a 5.8-percent increase over 1981. The developmental efforts are focused on rail transport.

Investments

In accordance with the economic strategy in the field of investments, in 1982 and in the subsequent years of the current five-year plan the investment volume will approximately equal that of 1980. Through intensified concentration of the capital available on high-priority projects to be put in operation this year, the effectiveness of the investments is expected to be improved considerably. The total investment volume for 1982 amounts to R 137.4 billion, with state investments accounting for R 121.6 billion, i.e. a 0.9-percent increase over 1981. These investments are to effect a significant increase in basic assets in the energy sector, in the metallurgical industry, in the machine building, chemical, light and food industries, in agriculture and in the transportation sector. The structure of construction investments is to be changed in favor of installations and equipment, the share of which is supposed to reach 39.8 percent. The total volume of state investments in installations and equipment will amount to R 48.4 billion. For the technical reequipment and reorganization of existing enterprises, R 21 billion have been allocated.

Foreign Economic Relations

In 1982, the USSR will continue to expand its foreign economic relations and it will still more effectively utilize the possibilities and advantages of the international division of labor. The USSR will intensify the extensive collaboration with the CEMA countries and the cooperation in the fields of production, science and technology.

Aside from expanding the commodity exchange, the USSR is continuing the extensive economic and technical assistance to the developing countries.

On the basis of equality and mutual benefit, the USSR will further develop its trade and economic relations with the capitalist industrialized countries.

Consistent Implementation of the Social Program

The planned increase in the Soviet economy's output--which will be effected through a labor expansion of merely 1 percent--will raise the GNP by R 13.4 billion over 1981 and it will create the conditions necessary for further improving the living standard of the population. Real income will rise by 2.1 percent, while the social consumption funds will expand by 4.1 percent to R 127 billion. For the implementation of new social measures, over R 4 billion will be expended in 1982. A large part of these funds will be spent on raising wages and salaries. Thus the workers' and office employees' average monthly wages and salaries will go up to R 177. The retail trade turnover is to increase by 3.1 percent to approximately R 300 billion. Services will be expanded by 6.9 percent.

Through the construction of 106.9 million square meters of living space, housing conditions will improve for approximately 10 million citizens. Furthermore, construction work is in progress on preschool institutions offering a total of 431,700 openings, on general-education schools for a total of 725,200 students (with 352,700 openings in the countryside) and on hospitals with a total of 60,000 beds.

8760
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REGIONAL DEVELOPMENT

FORMATION, PLANNING OF INTERSECTORIAL NATIONAL ECONOMIC COMPLEXES

Moscow EKONOMIKA I MATEMATICHESKIYE METODY in Russian No 1, Jan-Feb 82 (manuscript received 2 Oct 80) pp 65-76

Article by A. R. Leybkind and B. L. Rudnik (Moscow): "Problems of the Formation and the Organization of the Planning of Intersectorial National Economic Complexes"

Text The problems of increasing the quality of intersectorial planning and management are acquiring greater and greater urgency. Resulting from numerous factors of the development of the national economy, they arise at different levels of management. They are the problems of the creation of associations of the intersectorial type, the formation and development of territorial production complexes, the elaboration and implementation of comprehensive programs, the improvement of the planning and management of intersectorial national economic complexes (MK's). The solution of the indicated problems requires the coordinated implementation of diverse measures which are connected with the rationalization of various components of the economic mechanism. The improvement of the organizational forms of planning and management is of the greatest importance here.

The results of the first stage of the studies of the problems of setting up the management systems of intersectorial national economic complexes, which are being conducted by the Central Institute of Economic Mathematics and the Scientific Research Institute of Planning and Norms attached to USSR Gosplan are presented in brief in the offered article.¹

1. The Principles of Formation, the Specific Nature and Types of Intersectorial National Economic Complexes

The need or expediency of the formation of intersectorial national economic complexes is usually explained by the fact that the management of groups of similar or interrelated sectors will make it possible to solve more effectively the problems of economic development and first of all those problems, the accomplishment of which is faced with difficulties resulting from a narrow sectorial approach to planning and management. Without examining all the economic and social aspects of the preservation of departmentalism, let us merely note that their existence is connected, first of all, with the shortcomings of a number of components of the economic mechanism. It is obvious that without the elimination of these shortcomings the formation of intersectorial national economic complexes as objects of planning and management in itself will not solve the problem of departmentalism. The consolidation of the object of planning and the formation of another level in

the structure of the system of management can only create the conditions for the moderation of some of the indicated negative features. It should also be taken into account that the possibility of the nonconformity of the decisions being made by various organs to the needs of the development of the national economy also stems from the peculiarities of the structure and functioning of multilevel systems of management /17.

Thus, in spite of a number of already conducted studies, the causes which governed the expediency of the formation of intersectorial national economic complexes as objects of planning and management remain not entirely clear.² Neither the analysis of the proposed systems of intersectorial national economic complexes (their number already exceeds 20) nor the examination of the lists of problems, the solution of which, in the opinion of some authors, such a formation will promote /37, explains these causes. The latter either are formulated in an extremely general form or can be effectively solved without the creation of systems of the management of intersectorial national economic complexes.

The principles which are the basis for the formation of the sectorial structure of management should be examined first of all in order to ascertain the causes, which are responsible for the need to form such systems and determine their specific nature.

By a sector of industry there is usually understood a set of works, which are characterized by the unity of the purpose of the products, the similarity of the technical base and the technological processes, by means of which their output is accomplished, and by the similarity of the consumed types of raw materials and materials. In this manner in the sectorial structure the components of the production and technological system are united according to three types of ties, that is, according to the similarity of: 1) the purpose of the products; 2) the equipment and technology which ensure their output; 3) the resources being used. Such a procedure of integrating the components was formed during the period of the creation of the material and technical base of socialism, when the assurance in the shortest possible time of the economic independence of the country by the rapid development of the key sectors of heavy industry was one of the basic problems facing the national economy. Under these conditions the concentration of the production of items similar in purpose at enterprises subordinate to a single organ was of decisive importance for increasing the output of the most important products with the maximum loading of the limited capacities. As a result of the relatively low level of development of the productive forces the composition of the technological processes was distinguished at that time by great diversity. As a result, the uniting of works according to the attribute of the similarity of the items being produced in most instances also meant their grouping according to the similarity of the resources being used, the equipment and technology which ensure the manufacture of the products.³ The latter created the best conditions for the improvement of technological processes and the pursuit of a uniform technical policy.

The need to take into account the indicated types of ties remains now as well. However, modern scientific and technical progress, first, is decreasing their relative importance and, second, is limiting the possibilities of the sectorial structure when solving the problems corresponding to them of the coordination of the development of works. The former is explained by the increase of the role of the other

relations between the components of the production and technological system. Among them are the ties through the interchangeability of the products being produced and their complementariness, the complete utilization of resources and so on. Here it should be noted that the increase of the specialization and cooperation of production is complicating the consideration of the ties through deliveries of products. The latter results from the fact that at present the ties of the three indicated types quite often go beyond the individual sectors. Whereas at the stage of the creation of the sectorial structure of management, as was already noted, the number of technological processes was very limited and the common character of the purpose of the products, as a rule, meant the similarity of the technical equipment being employed and the resources being used, now the situation has changed substantially. More and more frequently items similar in purpose are being produced from different types of raw materials by means of dissimilar technological processes, new directions of the use of resources are constantly being discovered, methods of their complex processing, during which products of different purposes are produced in a single technological process, are being developed; often such products are produced by means of different processing methods, but on the basis of common technical principles.

Both the former and the latter circumstances are causing the substantial broadening of the group of problems of the coordination of the activity of the organs of sectorial management. The complication of the formulation of the national economic goals /5, 6/ and of their reflection in the sectorial plans is leading to the same result. It is becoming more and more difficult to determine the most preferable version of socioeconomic development. Special mechanisms of the statement and structurization of the goals, the determination of their relative importance, the formulation of the target indicators of the plan and their "translation" into the language of sectorial outputs are required.

Under these conditions a greater and greater amount of work, the high quality performance of which is becoming more and more difficult, weighs upon the organs of planning and management of the national economic level. The way out of the formed situation is the formation of another level of management of the economy, which is located between the sectorial and the national economic levels. The intersectorial national economic complexes correspond to this level.

Consequently, the formation of systems of management of intersectorial national economic complexes should promote the effective solution of two basic problems: 1) the coordination of the sectorial plans from the standpoint of the comprehensive realization of the national economic goals; 2) the interlinking of the development of sectors with respect to all the diversity of the ties existing between them. Thus, the goals toward which the sectors and their interrelations "work" should be taken into account when forming intersectorial national economic complexes.⁴ Hence two types of intersectorial national economic complexes--the special-purpose (TsMK's) and resource (RMK's)--can be distinguished.⁵

The TsMK is a set of sectors which ensure the achievement of a single national economic goal. Each complex includes two groups of sectors. The sectors directly involved in the achievement of the corresponding goal--"goal-realizing" sectors--belong to the first group, those "working" toward the goal indirectly (the technological equipment for light industry works through light industry for the goal "The Meeting of the Need for Clothing")--the "supporting" sectors--belong to the second group. The composition of the set of TsMK's is determined first of all by the

socioeconomic goals. At the same time the process of elaborating the procedures of targeting is still far from completion, while the proposed approaches have significant shortcomings. Under these conditions there is no possibility for the strict substantiation of one composition or another of the TsMK's and it is possible to propose only a rough list of them, which should be made more specific as the methods of targeting are further improved.

The RMK is usually defined as a group of sectors, between which close interrelations exist. Such an approach is unconstructive: it is not clear how one is to determine how close the interrelations of the sectors should be, so that the latter would form an RMK. The very term "the closeness of ties" also needs specification. We understand the RMK as a group of sectors, between which certain ties or others exist. All the sectors of the RMK can be covered by one or several ties of the same type or by a group of ties of different types. Some of them will apply only to a portion of the sectors of the RMK, but it must not be divided into two blocks which are not interconnected. Such an approach to the definition of the concept of the RMK is consistent both with the principle of the formation of the TsMK and with the practice of the formation of other subsystems of the national economy. Thus, for the sector it is not indicated how strong the similarity, for example, of the resources used by the works forming it should be. That this fact should be taken into account when singling out sectors as objects of management is another matter.⁶

Thus, the formation of TsMK's and RMK's presumes the evaluation of the diverse ties between the components of the production economics system. A list of ties, which should be taken into account when forming intersectorial national economic complexes, is cited in several works. Their analysis (see 177) shows that: 1) the lists of types of ties are characterized by significant diversity and are made up without any substantiation; 2) the content of many of their types remains undisclosed and the use of some of them arouses objections. The need arises to make a special study of the interrelations of sectors and to construct a classification of them, which is oriented toward the finding of content attributes, which describe their diversity and make it possible to use it in the procedures of forming intersectorial national economic complexes. A classification of this kind, which is used in this work, is cited in 177. Two attributes are the basis for it. The first one reflects the nature of the factors determining the ties; in conformity with them they are divided into those which are due to: a) production technological factors, b) the specific nature of natural processes, c) the features of the unproductive consumption of products. In accordance with the second attribute, which describes the restrictions on various parameters of the sectors, the ties are divided into four groups: according to the input, according to the transformation operator, according to the output and "product supplier-product consumer" (output-input). Here the products produced by the sector (the services rendered), as well as the waste products which form in the process of its operation are understood as the output; the means of labor, the specialists of various occupations and skill, the means of their unification and cooperation in the process of producing the products are understood as the transformation operator; the resources, including the semimanufactures, which are used both as the raw materials, from which the products are produced, and for supporting the functioning of the transformation operator, are understood as the input.

The most important problem connected with the formation of intersectorial national economic complexes is the determination of the organizational forms of their management. Whereas the expediency of the formation of subdivisions of the planning

of intersectorial national economic complexes is practically not to be doubted, directly opposed points of view are expressed about the need to form the corresponding organs of management, and with regard to the specific forms of the organization of such organs the opinions are divided: in some works it is proposed to consolidate ministries, in others it is proposed to create departments which would be assigned the management of the latter, in still others it is proposed to create organizations of the functional type, which are similar in nature to the sectorial committees during the period of existence of the councils of the national economy and so on.

The statements both in favor of and in opposition to the formation of organs of management of intersectorial national economic complexes are equally poorly argued. This is due to a number of reasons, first of all the undeveloped nature and inadequate practical effectiveness of the methods of improving the organizational structure of the management of the national economy and the lack of precise ideas about the functions and tasks of the systems of management of intersectorial national economic complexes. These two circumstances, to say nothing about the lack of study at the present time of the problems of the interrelationship of the organizational structure and the economic mechanism, do not make it possible to give a definitive answer to the question of the expediency of the formation of such organs. Without denying in principle the promising nature of the reorganization of the system of management, let us note the need for further studies for the thorough evaluation of the potential results and consequences of organizational transformations.

At present it is permissible to examine the problem of the formation of intersectorial national economic complexes as objects of planning in relative isolation from their study as objects of management. This is due to the fact that the organization of the process of planning in central planning organs (TsPO's) has its own specific nature and in many ways is independent of the organization of management as a whole. The creation of subdivisions of the planning of intersectorial national economic complexes will make it possible to increase the coordination of the plan assignments, the responsibility for the fulfillment of which can, just like today, be placed on sectorial ministries. At the same time, for the elaboration of the organizational forms of the planning of intersectorial national economic complexes there are quite precise ideas about an effective logic and technology of the compilation of plans, which meet the present requirements of economic development [67]. What is more, the formation of the indicated subdivisions is, in our opinion, a necessary organizational basis of the realization of this concept of planning. Let us also note that it is legitimate to regard the formation of subdivisions of the planning of intersectorial national economic complexes as a prerequisite of the formation of the organs of their management. The study of the experience of the functioning of such subdivisions will make it possible to understand more thoroughly the problems of intersectorial coordination and to prepare sound suggestions. Consequently, as the first stage of the studies of the problems of creating systems of the management of intersectorial national economic complexes it is expedient to single out the elaboration of the problems of their formation as objects of planning. These problems will be analyzed later.

2. A Typology of the Systems of Planning of Intersectorial National Economic Complexes

We will call the subdivisions being set up in central planning organs for the planning of the development of intersectorial national economic complexes systems of

intersectorial coordination (SMK's). From the large number of existing intersectorial national economic complexes it is necessary to select those which will become the objects of planning of the SMK's being formed. The following two circumstances are of decisive importance in such a selection: 1) the requirement to provide the best prerequisites for the comprehensive coordination of sectorial plans; 2) the noncoincidence of the groups of sectors with respect to the different types of ties, as well as with respect to the goals toward which they are working. The meeting of the indicated requirement under these conditions can be achieved by the inclusion of sectors in conformity with their interrelations and national economic goals, at the achievement of which their activity is aimed, in several intersectorial national economic complexes of the objects of planning, that is, in the spheres of activity of a number of SMK's.

Such an approach is based on the use of two methods of the organization of the management of the subsystems of sectorial planning, which correspond to the intersectorial complexes. In the case of the first method--the linear method--they are included in the SMK in question, in the case of the second method--the functional method--they retain their independence or belong to some other SMK. In the former case we will speak of "attached" sectors, while in the latter case we will speak of "associated" sectors. In this case as an attached sector the same sector can belong to only one intersectorial national economic complex, otherwise the sectorial subsystems will be in dual subordination, triple subordination and so on. Thus, the sectors of animal husbandry and agricultural machine building as attached sectors can be included in the agro-industrial RMK (APK), while as associated sectors they can be included in the "Clothing" and "Food" TsMK's (the former) and in the "Machine Building" RMK (the latter).

Let us dwell on the features of functional and linear management. In the case of functional management the SMK carries out the planning of the sector in a limited number of aspects from the point of view of the problems of coordination with respect to those ties which were responsible for the inclusion of this sector in the corresponding intersectorial national economic complex. Here, as was already said, one of two situations is possible--the sectorial subsystem: 1) retains its independence (we will say in this case that the corresponding sectors belongs to group 0), 2) belongs to another SMK. In the former situation the interactions between the system in question and the sectorial subsystem are accomplished indirectly, in the latter situation they are accomplished through the SMK which includes it.

In the case of linear management the comprehensive planning of the development of the sector and its coordination with the plans of the sectors of the corresponding intersectorial national economic complex are carried out within the SMK. In this case the requirements and suggestions of the other subdivisions of the central planning organ (TsPO), particularly the SMK's, to which the given sector belongs as an associated sector, are taken into account. Thus, the problems being examined by the SMK with reference to the attached sector can be broken down into two groups. The problems of the first group belong to the sphere of activity only of this system, the problems of the second group also belong to the sphere of activity of a number of other subdivisions of the TsPO. The latter are examined only in connection with the need to coordinate all the decisions being made on the development of a single sector. In the case of linear management the basic interactions of the sectors of the subsystem with the other subdivisions of the TsPO are accomplished through this SMK.

It should be noted that in addition to attached and associated sectors, which are relatively closely connected with the sectors of the intersectorial national economic complex which includes them, it is also possible to distinguish sectors, which have a very weak tie with them and therefore do not belong to this intersectorial national economic complex. Such, in particular, are the supplier sectors, the volumes of the consumption of the products of which by the sectors of the intersectorial national economic complex are negligible. Whereas for the sectors of the first two groups more or less detailed plan versions in certain aspects or others of their development are drawn up within the SMK, for the last group only quite unitized requirements (from the point of view of the assurance of the development of the sectors of the intersectorial national economic complex) are specified; in particular, orders for products are drawn up, which are reported to the SMK's to which these sectors are attached.

The SMK's can be classified according to the type of object of planning and the method of the organization of the management of the corresponding sectorial subsystems. From the point of view of the former attribute let us distinguish the systems of intersectorial coordination of the TsMK's and RMK's (STsMK and SRMK), on the basis of the latter let us distinguish the functional and linear systems. Only the associated sectors correspond to the functional systems, just one attached sector corresponds to the linear systems.

According to the definition given above, the goal-realizing and supporting sectors belong to the TsMK. However, the TsMK as an object of planning will have a somewhat different composition. First, some supporting sectors might not be included in the TsMK in question (they will belong, in accordance with their ties, to other intersectorial national economic complexes or to group Θ), that is, the "consumer-supplier" chains may break in certain places or others. Second, in addition to the sectors which work directly or indirectly toward a specific goal, sectors strongly linked with them may belong to the TsMK. Such an approach to the formation of TsMK's--the objects of planning--is explained by the need to ensure the optimum organization of the process of compiling the plan of the system of the intersectorial national economic complex as a whole under conditions when a significant number of diverse ties exist between the sectors.

Both the goal-realizing and the supporting sector can belong to the TsMK as an attached or an associated sector. Whereas in the former case the STsMK carries out its comprehensive planning, in the latter case it does so only in a certain aspect which is determined by those factors which were responsible for its inclusion in this TsMK. Here the problems of the development of the supporting (for this sector) works are not examined. They are analyzed in the corresponding linear system. Thus, the sectors, the activity of which is aimed at the support of the functioning and development of associated sectors, are not included in the TsMK (this is also correct for the RMK). Hence, in particular, it follows that the functional STsMK's contain only goal-realizing sectors. At the same time the structure of the TsMK--the object of planning of the linear system--is, as a rule, much more complex. In general it looks as follows.

The attached sectors can be broken down into three blocks: 1) JC(1), which includes the sectors, the activity of which is connected only with the direct realization of the goal of the given TsMK; 2) JC(2), which unites the sectors, the activity of which is connected both with the direct realization of the goal of the

given TsMK and with the fulfillment of other tasks, particularly the achievement of the goals of other TsMK's; 3) J_p, which contains the sectors, the products of which are consumed by the sectors of blocks J_{C(1)} and J_{C(2)}, as well as in the block J_p itself. Let us include here the attached sectors, which have ties of different types with the sectors of blocks J_{C(1)} and J_{C(2)} and with the first group of sectors of block J_p and do not "work" directly or indirectly toward the goal of the given TsMK. The net weaving industry, which is closely connected with the sectors of the textile industry through the transformation operator and "works" through the fish industry toward the goal "The Meeting of the Need for Food," is an example for the "Clothing" TsMK, which is examined below. Let us note that the same sector can belong simultaneously to blocks J_{C(2)} and J_p. For the "Clothing" TsMK many sectors of the textile industry, which deliver their products both to the sewing industry and directly for consumption by the people, are such sectors.

In the set of associated sectors there are two blocks: 1) P_C, which unites the sectors, the products of which directly realize the goal of the given TsMK; they may be among the attached sectors for other intersectorial national economic complexes or may belong to group Θ (for the "Clothing" TsMK the sector "The Production of Rubber Footwear," which as an attached sector belongs to the "Chemistry" complex, is grouped with them); 2) P_p, which includes the sectors, the products of which are consumed by the attached sectors of the TsMK; just as the sectors of block P_C, they may belong as attached sectors to other intersectorial national economic complexes or to group Θ (the sectors of agriculture for the production of flax, cotton and other raw materials for the textile industry, which as attached sectors belong to the resource agro-industrial complex, serve as an example for the "Clothing" TsMK). In addition to the indicated sectors, the associated sectors, which do not work toward the goal of the TsMK, but are closely connected with its attached sectors, are included here.

The SRMK's also are divided into functional and linear SRMK's. The following situation is typical of the formation of the former. There is an RMK, the sectors of which are covered by close ties. At the same time for each of them there are ties of some type with the sectors of one RMK (TsMK) or another, and they are closer than the ties with the sectors of the given one. Then for the coordination of the development of the sectors of this intersectorial national economic complex it is expedient to create a functional system, having attached them at the same time to the indicated RMK's (TsMK's).

As an example of such a system it is possible to cite the SMK of the "Construction Materials" complex, which unites the sectors which are covered by the tie through the interchangeability of the products being produced: chemistry (in the area of the production of plastics and polymers), the production of ferrous and nonferrous metals and so on. At the same time these sectors as attached sectors belong to other intersectorial national economic complexes, for example, the production of plastics belongs to the "Chemistry" TsMK. The task of this SMK could consist in seeking the most efficient structure of the consumption of interchangeable types of products in different spheres of the national economy and the formulation of the demands on the plans of the development of the sectors of the RMK, which are reported to the appropriate linear systems.

Let us now examine the linear SRMK's. In general their object of planning has the following structure.

Included in the attached sectors are the blocks: 1) $J_R(1)$, which includes the sectors which produce the final product of the RMK; the products, which are consumed to a considerable extent by other intersectorial national economic complexes and for the planning of the production of which this SMK bears responsibility on the scale of the entire national economy, that is, the characteristic products for it, are grouped with it; 2) $J_R(2)$, which contains the sectors, the products of which are consumed by the sectors of block $J_R(1)$ and in block $J_R(2)$ itself. Block $J_R(2)$ also includes attached sectors, which do not belong either to the sectors producing the final product or to those ensuring its production, but have close ties of certain types or others with such sectors. Such a sector, which is closely connected with the indicated sectors through the transformation operator and therefore belongs to the given intersectorial national economic complex as an attached sector, the products of which, however, are characteristic of another intersectorial national economic complex, to which it belongs as an associated sector, can be an example of a sector of this type. Thus, the hydrolysis industry in conformity with its ties through the transformation operator belongs to the agro-industrial complex, while producing at the same time products which are characteristic for the "Chemistry" intersectorial national economic complex. Such a situation is characteristic of the case when the same product is produced by means of several substantially different technological processes.

Within the associated sectors it is possible to distinguish two blocks: 1) $P_R(1)$, which unites the sectors which produce the final product (the just described situation, that is, when some sector is closely connected with the sectors of another intersectorial national economic complex and at the same time its products are characteristic for the given SMK, in particular, sectors producing these products are present in block $J_R(1)$, can be indicated as an example); 2) $P_R(2)$, which contains the sectors which support the functioning and development of the attached sectors. In addition to this, the sectors, which are not involved directly or indirectly in the output of the final product of the RMK, but are closely connected with its attached sectors, are included in block $P_R(2)$.

3. A General Characterization of the Procedure of Forming the Intersectorial National Economic Complex

Among the questions of the organization of the planning of the intersectorial national economic complexes the problem of the determination of the composition of these complexes occupies an important place. The shortcomings of the previously proposed procedure of forming intersectorial national economic complexes [37] (the main one is the absence of a connection between the features of the procedure of forming intersectorial national economic complexes and the specific nature of the problems, for the solution of which they are formed) dictated the need to develop a new one which meets the tasks of this work.⁷ Here the admissibility of the inclusion of one sector in several intersectorial national economic complexes is the most important demand on it. The realization of the indicated requirement is achieved by means of a specific method of the recording and evaluation of intersectorial ties. The operations of the repeated "superposition" and analysis of the various hierarchical groups of sectors, which were obtained during the evaluation of the closeness of the intersectorial ties both with respect to their individual types and for the set, as well as the breakdown of the set of sectors according to the attribute of their involvement in the realization of the goals of the plan are the basis for it.

Accordingly the procedure of forming intersectorial national economic complexes includes the following stages: 1) the determination of the types of intersectorial ties and the goals of the development of the national economy, which will be examined when forming the intersectorial national economic complexes; 2) the formation of the blocks of the goal-realizing sectors, the creation of the basis of the TsMK's; 3) the grouping of the sectors according to the individual types of ties; 4) the formation of the blocks of sectors by the simultaneous consideration of all the types of intersectorial ties in question, the creation of the basis of the linear RMK's; 5) the determination of the list of intersectorial national economic complexes and the sectorial composition of each of them. Here the results obtained at the third of the named stages are of great importance. They are used, in particular, when forming functional RMK's.

A peculiarity of the procedure is the combination in it of formal and informal operations. Here the methods of automatic classification are used as the formal structure. The specific algorithms and coupling coefficients of the sectors were selected on the basis of the results set forth in /9/.

The system of the intersectorial national economic complexes was distinguished by means of this procedure. A modified tree of goals, which is described in /6/, and the intersectorial balance sheets of current deliveries and fixed capital for 1966 and 1972 were used as the most important sources of information. The calculations were made at the Main Computer Center of USSR Gosplan on a YeS-1030 computer. The high level of aggregation of the sectors in the used intersectorial balance sheets makes it possible to determine only the quite general contours of the system of intersectorial national economic complexes. Moreover, the formation of the goal-realizing blocks of the TsMK is complicated by the lack in their nomenclature of the sectors of the nonproductive sphere. For the specification of the composition of intersectorial national economic complexes by means of /4/ a shift was made to a more detailed and complete nomenclature of the sectors.

The fact that at present a number of problems of a procedural nature, particularly the obtaining of the initial information for the calculations, have not been solved, does not make it possible to formulate definitive answers to many questions which are connected with the formation of intersectorial national economic complexes, including to determine their final composition. For example, the problems of the structurization of the goals, the methods of obtaining evaluations of the various types of intersectorial ties and so on require further elaboration. Therefore, when developing and using the procedure of forming intersectorial national economic complexes a quite limited group of tasks were set and accomplished: a) to identify the basic features of the procedure being used, as well as the problems, the solution of which will make it possible later to proceed to the elaboration of more perfect methods of the formation of intersectorial national economic complexes--the objects of planning and management; b) to get a more complete idea than the existing one about the possible versions of the composition of intersectorial national economic complexes; c) to distinguish the system of intersectorial national economic complexes, which illustrates the proposed approach to their formation.

It should be noted that in some instances the attachment of a sector to one of the intersectorial national economic complexes containing it (or its inclusion in group Θ) is a quite complicated task. At times it is united by close ties with the sectors of several intersectorial national economic complexes and it is

difficult to give preference to one of these groups of ties. Such a situation formed, for example, with the sector "Pit Mining and Ore Mining Machine Building," which in accordance with the results of calculations belongs to the "Ferrous Metallurgy," "Nonferrous Metallurgy," "Chemistry" and "Machine Building" intersectorial national economic complexes, as well as to the fuel and power complex. In such situations a detailed content analysis of the intersectorial ties is required, and in a number of instances the preferability of one decision or another can be established only in the process of the functioning of the organizational systems being created. It is also necessary to indicate that at times the nomenclature of the sectors presented in 14 is insufficiently broken down. Thus, works of sewing machines and refrigerators are included in the same sector. At the same time there are no significant ties between these two works and they "work" toward different goals, as a result of which their unification within a single intersectorial national economic complex lacks grounds. Therefore the inclusion of several sectors in the intersectorial national economic complex was carried out only in the area of the production of individual types of products.

With allowance made for the noted circumstances let us cite for illustration of the described approach to the formation of intersectorial national economic complexes the approximate compositions of the "Clothing" TsMK and the timber RMK (for the associated sectors the intersectorial national economic complexes, to which they belong as attached sectors, are indicated in parentheses).

The "Clothing" TsMK. Blocks J_C(1) and J_C(2): 1) the sewing industry; 2) the leather, fur and footwear industry (the leather haberdashery, fur and footwear industry, expect the production of rubber footwear, the bristle brush industry); 3) the textile industry (the cotton, linen, wool and silk industry, the production of textile haberdashery, the knitwear and the fulling and felting industry); 4) dry cleaning and dyeing, laundries; 5) the household appliances and machines industry (sewing, knitting machines and so forth). Block J_p: 1) the leather, fur and footwear industry (the production of natural leathers, artificial leathers and film materials, fake fur, harness and saddle production); 2) the textile industry (the production of nonwoven materials, the cotton ginning, hemp and jute and net weaving industry); 3) the tanning extract industry; 4) other works of light industry; 5) the sectors producing technological equipment for the attached sectors of the "Clothing" TsMK. Block P_C: 1) the production of rubber footwear; 2) the household chemical industry (both are included in the "Chemistry" RMK). Block P_p: 1) animal husbandry; 2) plant growing (both are in the agro-industrial complex); 3) the chemical fiber and filament industry; 4) the varnish and paint industry; 5) the synthetic dye industry (all three belong to the "Chemistry" RMK).

The Timber RMK. Block J_R(1): 1) forestry; 2) the logging industry; 3) the wood processing industry; 4) the wood chemical industry. Block J_R(2): 1) the production of equipment for the logging industry, woodworking equipment and woodworking tools; 2) timber floating. Block P_R(2): 1) the pulp and paper industry (the "Printing" RMK); 2) the furniture industry (the "Living Conditions" TsMK).

4. Some Features of the Functioning of SMK's

The creation of SMK's, in addition to the determination of their functions, will require a change of the spheres of activity of the already existing subdivisions of the TsPO, as well as of their interrelations in the process of compiling the

plans. Here within the framework of the realization of the principles of comprehensive planning and the distinguished types of SMK's a significant number of versions of the specific configurations of the indicated process is possible. Although they will all conform to the logic of the drafting of the plan "from the goals to the resources," substantial differences might be found between them.⁸ They are determined first of all by the degree and form of the centralization of the decisions on the distribution of resources: in one case only the total amount of financial resources being allocated for the achievement of the goals is distributed centrally (by the consolidated system), in another the amounts of the most important national economic resources are so distributed and so on. Versions in the degree of aggregation of the indicators are also possible: the SMK's and the sectorial systems may work in a single products list or the latter may work in a more detailed list. The role of prices in the process of compiling the plan can also be different: they can be used only for the comparison of the amounts of various products or can express the intensity of the public demand for products and the socially necessary expenditures on their production, can play a more or less active role in the balance coordination of production and consumption.

The selection of a specific configuration of the drafting of the national economic plan is a complicated problem. Its solution presumes the examination of the entire set of problems of the improvement of planning (its technology, the system of indicators of the plan and so on), which go far beyond the questions proper of the "incorporation" of the SMK's in the structure of the TsPO. Under these conditions the various aspects of such incorporation can be studied only on a very general level, while the results of these studies are embodied in the configurations which have a quite high degree of aggregation and are free of details.

The organizational-technological configuration of the process of planning, which combines its two aspects: the organizational aspect, which reflects the composition of the tasks and the interrelations of the subdivisions of the TsPO, and the technological aspect, which characterizes the sequence of operations on the compiling of the plan, can give a quite complete idea of the incorporation of SMK's in the structure of the TsPO. The description of such a configuration goes beyond the framework of this article. Therefore let us dwell only on a few of its features.⁹

The two already mentioned demands on the system of planning: the provision of the optimum conditions for the coordination of the development of sectors and the formulation of the ultimate goals of the plan, are the basis for the configuration.

The former is achieved by the elaboration of versions of the development of the sector by a large number of SMK's, during which its most important ties should be taken into account, as well as of the subsequent coordination of the indicated systems, which makes it possible to eliminate the possible contradictions in their projections. Here the accepted procedure of allocating resources for the development of the associated supplier sectors should be noted. In accordance with this configuration, and in this lies its essential trait, not only the determination of the indicators of the need for the products produced by the SMK's and the delivery of orders to the appropriate linear systems, but also the allocation of resources for the assurance of the necessary production volumes are included in the functions of the SMK's. Thus, the "consumers" manage the resources. Such a procedure of allocating resources enhances the role of the latter in the selection of the plan versions and ensures their priority in the determination of the assortment and the volumes of the output of products. For example, the indicators of the amounts of

resources for the production of nitrogen fertilizers are specified within the agro-industrial complex. They are reported to the "Chemistry" SMK, in which the nitrogen industry is included as an attached industry. In turn, the assets for the production of agricultural products, which were received from the "Food" and "Clothing" TsMK's and a number of other intersectorial national economic complexes, are concentrated in the SMK of the agro-industrial complex.

The tasks of formulating the ultimate goals of the plan are divided between the system of consolidated planning and the STsMK's. The goals of the top levels are attached to the former. It calculates the indicators of their realization, carries out the allocation of the resources necessary for the achievement of these indicators, that is, draws up the "resource-goal balance sheet." A few ("global") resources, for which not only the distribution, but also the production are planned, are included in the sphere of its activity.

A certain "cluster" of the set of national economic goals, the apex of which is the goal of the lower level for the system of consolidated planning, is attributed to each of the STsMK's. The latter determines the values of the corresponding target indicators, allocates resources for their achievement, and then on the basis of this formulates the indicators of the development of the sectors of the TsMK.

Thus, the most important detail of the configuration in question is the special-purpose distribution of national economic resources, which is carried out in sequence through the block of consolidated planning and the STsMK, is based on the above-mentioned mechanism of the allocation of resources for the development of sectors, creates the necessary prerequisites for both the setting of the goals and the provision of the conditions of their realization and makes it possible to approach a solution of the problem of combining the special-purpose and resource aspects of planning.

Another important feature of the configuration in question is the combination of centralization and decentralization in the process of coordinating the planning decisions. In the former case their coordination is carried out by the system of consolidated planning, in the latter it is carried out by local interactions of the SMK's. Here the degree of centralization depends essentially on the number of "global" resources. Its determination is a complex problem, which requires the conducting of special studies and the analysis of the specific conditions of the drafting of the plan. As to the composition of "global" resources, there should be included in their group, first, the products which are consumed by many intersectorial national economic complexes and, second, the products, one version or another of the distribution of which has a substantial influence on the choice of the direction of the development of the national economy as a whole.

Of course, the problems of the functioning of SMK's were examined here only on a most general level. The introduction of this configuration in planning practice will require the further analysis of a number of problems, beginning with the determination of the list of "global" resources and the structurization of the national economic goals and ending with the modeling of the choice of the versions of the realization of the latter.

FOOTNOTES

1. In addition to the authors of the article, N. L. Volkova, T. I. Guseva and A. N. Zaimskikh took part in the work.
2. In the studies of the problems of the formation of intersectorial national economic complexes it is possible to distinguish three directions. The first involves the use in the problems of planning of the properties of the expandability of the matrices of the intersectorial balance. The reduction of these matrices to a block-triangular or a block-diagonal form was the basis for the approximate planning calculations or the use of various methods of the solution of balance sheet equations. Later the idea of forming intersectorial national economic complexes was stated in connection with the problem of constructing a system of models of optimum planning: the models of the intersectorial national economic complex are regarded in this case (the second direction) as an intermediate level of the coordination of the sectorial plans, the introduction of which makes it possible to simplify the global national economic model. The works, in which the formation of intersectorial national economic complexes as objects of planning and management with the creation of the corresponding subdivisions and organs is proposed, form the third direction. Here, in contrast to the second direction, the formation of intersectorial national economic complexes is not directly connected with specific systems of models and is oriented in most cases toward the solution of the entire set of planning and management problems which are determined by the diverse relations between sectors. The distinction of the named directions is quite arbitrary, and they are not themselves limited to any time frame, although they do reflect to a certain extent the gradual development of the views on the problems of the formation of intersectorial national economic complexes. One should speak, rather, of the continuity and interrelated development of the studies within the different directions, which comes through most clearly when examining the formalized procedures of the creation of intersectorial national economic complexes [2]. In the third direction, in turn, it is possible to distinguish three groups of works, which are devoted to the problems: the formation and management of individual intersectorial national economic complexes, the elaboration of the procedures of the formation of their system, the improvement of management in connection with the appearance of intersectorial national economic complexes; at the same time the tendency for these studies to be "consolidated" is now already being observed.
3. This circumstance was reflected in [4], in which the sector of industry is defined as a set of enterprises which have been singled out according to one tie--the similarity of the products being produced. Anticipating a little, let us note that the practice of planning and accounting now already requires other groupings of works, therefore in [4] so-called collective sectors, for which "nonsectorial ties" are the basis, are distinguished.
4. In some works when singling out intersectorial national economic complexes the common nature of the goals of the functioning of the sectors is regarded as one of the types of intersectorial ties. Such a combination seems unjustified. The specificity of the causes responsible for the need to group sectors according to the common nature of the goals makes it possible to regard them as an independent "complex-forming factor" [7].

5. Along with TsMK's and RMK's there can also be singled out program intersectorial complexes, the specific nature of which is determined by the content of the program methods of planning and management /8/.
6. The above-cited definition makes it possible to regard the concept of intersectorial national economic complexes as a generalization of the concept of the sector. The latter is an intersectorial national economic complex, in which the works, which are covered by the three specific ties for the sector, are included. Moreover, this definition makes it possible from uniform positions with respect to the various combinations of ties to distinguish diverse intersectorial national economic complexes--the objects of planning, management, study and so forth.
7. The size of the article makes it possible to give only a description of the most general features of this procedure.
8. The iterative nature of the process of planning makes it possible to single out its "starting point" only conditionally. The content of the most important principle, which determines the specific nature of the cyclical sequence of the stages of the drafting of the plan, is, as a rule, the basis for such a distinction.
9. See the more detailed description in /10/.

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TERRITORIAL, SECTORIAL PRINCIPLE OF PLANNING

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/Review by Candidates of Economic Sciences Docents R. Burduladze and G. Shalabin (Leningrad) of book "Territorial'no-otrasлевой принцип планирования: теория и практика" /The Territorial-Sectorial Principle of Planning: Theory and Practice/, edited by Professor B. M. Mochalov, Mysl', Moscow, 1980, 254 pages: "Urgent Problems of Socioeconomic Planning"/

/Text/ At all the stages of the building of communism the CPSU has devoted particular attention to planning and management as the most important manifestation of the economic organizing function of the socialist state. This is also reflected in the work of the 26th party congress, which emphasized, in particular, the need for a comprehensive approach to the planning of the development of the interrelated sectors of the national economy and the economic regions of the country.¹ The Leninist principle of the close combination of territorial and sectorial planning is one of the most important methodological principles of the planned management of the economy. In the system of measures outlined by the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality," considerable attention is devoted to the problems of the unity and coordination of the territorial and sectorial aspects of the plan. This is in line with the instructions given by Comrade L. I. Brezhnev at a meeting with voters of Baumanskiy Rayon of Moscow on 2 March 1979 that "...only the rational combination of the sectorial and territorial principles can ensure the efficiency of management."²

The collective monograph under review of the staff members of the Moscow Institute of the National Economy imeni G. V. Plekhanov jointly with the Leningrad Institute of Finance Economics imeni N. A. Voznesenskiy and the Central Scientific Research

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1. See "Materialy XXVI s"yezda KPSS" /Materials of the 26th CPSU Congress/, Moscow, 1981, p 198.
 2. L. I. Brezhnev, "Vo imya schast'ya sovetskikh lyudey. Rech' na vstreche s izbiratelyami Baumanskogo izbiratel'nogo okruga g. Moskvy 2 marta 1979 g." /In the Name of the Happiness of the Soviet People. Speech at a Meeting With the Voters of the Bauman Electoral District of Moscow on 2 March 1979/, Moscow, 1979, p 14.

Institute of Economics attached to USSR Gosplan is one of the interesting studies of the problem of the improvement of sectorial and regional management and planning under the conditions of mature socialist society. The authors focused attention on the key questions of the theme. The social combination of production, the level and forms of concentration, the economic and organizational bases of the formation of production economic complexes (PKhK's) are studied. It is justly noted that integration on the basis of the formation of PKhK's is now an important factor of the increase of production efficiency.

The work consists of two sections: "Methodological Problems of the Combination of the Principles of Sectorial and Territorial Management" and "The Improvement of the Forms of Sectorial and Territorial Management," which contain eight chapters. The breakdown of the book was, however, to a significant extent arbitrary, since a large portion of the questions are analyzed in both sections, although in different aspects.

The methodological problems of ensuring the conformity of the development of the structure of production and the system of management under present conditions are examined in the work. The existence of a colossal economic potential is creating greater demands on the balancing of resources and needs, in general on the scientific soundness of the national economic plans. It is all the more important when determining the trends of development of the structure of social production, its concentration and combination to take into account both the general economic and the sectorial factors (see p 23). In this connection the assumptions of the authors about the "criteria of optimality" of the size of PKhK's are interesting; the assumption, according to which the goal of the creation of PKhK's consists "not only in the maximum increase of the output being produced, but also in the creation of better working conditions of workers and better conditions of environmental protection. The formation of the new man, of the socialist way of life is most important," is correct (p 57). The remark of the authors that "many of the economic relations and ties, which make up the territorial structure, are a part of the reproductive and sectorial structure" (p 77) is also quite correct, this increases the need for the examination of economic processes in unity. In this case the territorial plans are aimed (to a greater degree) toward the solution of intersectorial problems and the assurance of harmonious socioeconomic development in the republics and regions of the country (see p 88).

The problems of the planning of territorial production complexes (TPK's) are of particular interest in the monograph. A detailed economic characterization of the features of the functioning of TPK's in the overall system of the economy of the country is given. The composition (structure) of the plan of the comprehensive development of TPK's and the problems, which should be solved by them, are reflected quite thoroughly, recommendations on the comprehensive development of TPK's are cited.

The logically consistent approach to the examination of the raised problems should be ascribed to the merits of the book. In particular, the relationship of conformity to plan and planning is successfully shown.

In the work the emphasis is placed on the substantiation of the production and organizational structures and systems of management of PKhK's. This is entirely logical and natural, since in this area of research economic science remains greatly indebted to practice and there are many unsolved problems here. The

authors quite correctly emphasize the importance of the use of simulation modeling and formulate its basic general rules and principles with reference to the conditions of PKhK's. The ideas of such an approach, generally speaking, were stated long ago by economists and mathematicians, but did not receive extensive application in practice, while the effectiveness of the realized models was inadequate. Unfortunately, the reasons for such a situation were not analyzed in the work.

The identification of the changes of labor and the measurement and evaluation of the efficiency of social production with a breakdown by sectors and territories are of fundamental importance for the questions examined in the monograph. The authors return repeatedly to the last problem. Thus, for example, when examining the problems of improving the economic mechanism, they correctly emphasize that the role in this matter of volumetric value indicators at present is hypertrophying (see pp 221, 222); at the same time the underrating of the physical and material structure of production is being allowed. In this connection the need to measure efficiency according to the final national economic results is correctly indicated.

New methods and approaches to the measurement of efficiency on the level of sectors, regions and enterprises (associations) are also needed. But what kind? An attempt to answer this question is contained only in the conclusion of the work, where the interesting and meaningful idea of the possibility of using reference indicators is stated. It is to be regretted that this idea did not receive development in the book. The occasionally excessive descriptiveness of the exposition, in our opinion, is one of the shortcomings of the work. We would have liked to have seen more precise and constructive recommendations of a practical nature. In this sense those fragments, which are devoted to the improvement of the planning of the comprehensive development of regions and the economic mechanism, compare favorably. Here the authors substantiate a number of important hypotheses: on the formation of the budget, the coordination of the indicators and measures of the plans of enterprises with the means and interests of regions (see pp 207-217) and others. It is necessary to stress that these hypotheses in content and nature are in keeping with the Law on the Basic Powers of Kray and Oblast Soviets of People's Deputies, the Soviets of People's Deputies of Autonomous Oblasts and Autonomous Okrugs, which was passed in 1980 by the Third Session of the USSR Supreme Soviet.

When examining the problem of the socioeconomic efficiency of the management and planning of production under the conditions of PKhK's, the authors come to the logically correct conclusion that the main task of PKhK's should consist in the achievement of the maximum results with the complete and efficient use of all the available resources—"manpower, scientific, technical, material and natural." The maximization of the satisfaction of needs with the efficient use of the available scientific, technical, production and economic potential is the criterion of the socioeconomic efficiency of the functioning of PKhK's (see p 227).

Among the merits of the work under review is the abundance of factual data and interesting tables.

At the same time not all of the problems were examined in enough detail by the authors. Thus, for example, undeservedly little attention is devoted to long-range planning. The formation of new PKhK's is a complicated process which requires a long time. The fundamental assumption that the intensification of the role of the long-range plan is one of the most important strategic directions of the improvement

of the entire system of planning and the economic mechanism, is not reflected and is not revealed in the work. While allotting much space to long-range goal programs (which in itself is a positive thing), the authors mention only casually (see p 216) the possibilities of drafting a long-range plan.

As we believe, the concluding paragraph of Chapter 8 "The Planning and Improvement of the Training of Management Executives," especially that part of it in which it is a question of what a manager of "any level" should be able to do, does not correspond to the general quite high level of the monograph (see p 235).

Chapter 4, which is devoted to cost accounting, credit, finance and so on, as if falls out of the work under review, it stands apart with respect to its other parts and does not have a logical connection with them. The questions of pricing, finance and credit are examined as if in themselves, outside any connection with the overall theme of the work. In some cases the authors, when enumerating the main cost accounting indicators, forget about the indicator of the standard net output. On page 47 it is correctly noted that "public ownership is the basis of the relations of conformity to plan"; but it was necessary also to reflect the inverse relationship, to show that public ownership can be realized only under the conditions of centralized management and planning.

In some cases the reader might get the impression that the authors recognize as a panacea for all undesirable trends "systems modeling" and in general the use of mathematical methods in management and planning (see pp 37, 147 and others). Unjustifiably much attention is devoted to industrial robots (see pp 70-74), which is not directly connected with the basic problems of the book.

Speaking about the work as a whole, let us emphasize that the authors undertook a useful comprehensive examination of the processes of the improvement of the organizational forms of production and management. As a whole the monograph under review was written at a high theoretical level, its authors take a correct stand; as to the cited critical remarks, they are explained to a great extent by the complexity and debatability of the problems in question.

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